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The Training Analysis Digest is a compilation of training improvement studies and projects which have contributed to better instruction and the refinement of course content. It provides a system for reporting the efforts of individual training centers at the Chanute, Keesler, Lackland, Lowry, and Sheppard Air Force Bases in improving enlisted men and officer courses and in evaluating course graduates. Basic training, medical services, equipment operation, weapons systems, communications, electronics maintenance and repair, procurement, instructional program planning, and Project 100,000 for low ability personnel are among the activities and subject areas represented. Report summaries, with applications of findings and conclusions, are given for 16 completed and seven incomplete projects. Three completed and six incomplete category test projects are also described, along with 70 special studies and projects (37 incomplete) and 140 changes to ATC (Air Training Command) Type 3 technical training courses. Course members and titles, specific changes, and reasons are indicated for items in this last category. Also included are statistical summaries of course changes, activations, and discontinuations. (author/ly)

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for
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NUMBER
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AIR TRAINING COMMAND

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HEADQUARTERS AIR TRAINING COMMAND
RANDOLPH AIR FORCE BASE, TEXAS

FOREWORD

The Training Analysis Digest is a compilation of training improvement studies and projects which have contributed to improvment of instruction and refinement of course content. It provides a system for reporting the efforts of individual training centers in improving training courses and in evaluating course graduates.

This report contains information of value to persons associated with all levels of training. It should receive wide dissemination.

FOR THE COMMANDER

JOHN L. LOCKE, Major General, USAF
DCS/Technical Training

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PART I

PR 68-18
TECHNICAL TRAINING PROVIDED IN SUPPORT OF THE FIRE PROTECTION SPECIALTY AFSC 571X0

Summary:

This evaluation was conducted to determine the effectiveness of the technical training programs provided in support of the Fire Protection Specialty AFSC 571X0. The findings of this report are based on the field and internal evaluation of 3ABR57130-1, Fire Protection Specialist; 3AAR57170-1, Fire Protection Supervisor; 3AZR57150-2, A/S 32 P-2 Fire Fighter, Vehicle Operator; and CDC 57130, Apprentice Fire Protection Specialist as well as the internal evaluation only of 2ASR57150-2, Fire Protection Technician and 3AZR57150-1, Fire Protection Specialist (Missiles).

Findings indicate that the training programs provided in support of AFSC 571X0 were all highly rated by field personnel with no individual course problems of significance. Training materials provided for career progression (CDC) are being rewritten as a combination 57130/57150 CDC. This rewrite will: (1) lower the reading level to that of approximately the 8th grade, (2) add information and illustrations to update and increase self-instructional effectiveness, and (3) include certain previously omitted subject knowledge material.

Application of Findings/Conclusions:

Comprehensive evaluation efforts of this type should be attempted only if a career field appears to require excessive training or where unnecessary duplication of training in the various courses supporting the career field is suspected.

PR 68-23
RESIDENT INTERIM TRAINING REPORT
(PROJECT 100,000)

Summary:

This evaluation was conducted to determine if the modifications and changes made to test courses (Project 100,000) were adequate for New Mental Standard airmen, to analyze the causes for elimination of New Mental Standard airmen, and to make conclusions from the findings in each test course. Findings are based on an analysis of information obtained from training data folders maintained on each test student and Departments' Monthly Reports listing course modification data, training innovations, training procedures utilized, and the success or failure of actions taken in training New Mental Standard airmen.

Findings indicated that as a result of the limited background of many New Mental Standard airmen, normal hours and methods of instruction are not sufficient to train these airmen. Extra time is required for course modifications, administration, remedial instruction, individualized instruction, pretesting, and pretraining in order to prepare the airmen for entry into and completion of selected technical training courses.

Application of Findings/Conclusions:

Findings concerning training New Mental Standard airmen were provided to training activities for review and necessary course modification and improvement. Most New Mental Standard airmen are capable of completing selected technical training courses and progressing in their career field with normal supervision and, in some cases, additional training and OJT time.

PR 68-32
TEST GRADUATE EVALUATION REPORT (PROJECT 100,000)

Summary:

This evaluation was conducted to determine the adequacy of training received by New Mental Standard airmen in selected training courses (Project 100,000), the ability of these airmen to perform in their respective AFSCs, and recommendations for continued training of New Mental Standard airmen in selected test courses.

Findings are based on an analysis of information obtained from questionnaires sent to the supervisors of graduates and from interviews with New Mental Standard airmen and their supervisors. Findings indicated that supervisors of New Mental Standard airmen consider the training to be adequate and that most graduates are progressing satisfactorily in their career field.

Application of Findings/Conclusions:

Results of the report were provided to training personnel for information and review, and necessary course modification and improvement. It was concluded that training of New Mental Standard airmen should be continued in selected technical training courses.

PR 69-3
AUTOMATIC FLIGHT CONTROL SYSTEMS SPECIALIST COURSE 3ABR32530

Summary:

This type 3 course is designed to train airmen to the apprentice level, in the inspection, maintenance and repair of automatic flight control systems, remote electronic compass systems, vertical reference systems, and related subassemblies and components. The individual ratings of the training by 44 field supervisors on 53 field questionnaires and by 7 field supervisors on the Job Performance Evaluation (JPE) indicated that this course was providing adequate apprentice level training in the tasks and knowledges required by graduates in the field. Training provided on only one training standard task element and one fundamental subject, listed in the field questionnaire, appeared to require review. The task was Using Technical Orders and Manuals, and the subject was Oscilloscopes. The adequacy rating for each item was in the marginal area of acceptability (79%), with 80% being used as the criterion. The internal evaluation indicated that the factors affecting overall operation and quality of the course were satisfactory.

Application of Findings/Conclusions:

The training on oscilloscopes, and on the use of technical orders and manuals, will be reviewed as the basis for improvements in training materials and instructional techniques.

PR 66-20 (10 Volumes)
Volumes 1-9 and Synopses of Volumes 1-7 Complete
Volume 10 Not Complete

DOD AND USAF C-E TRAINING SERVICE TEST PROGRAM

Summary:

The DOD/USAF C-E Service Test Program embodied two different experimental concepts of training, designated "X" (Cue-Response) and "Y" (Applied Electronics), respectively. The "X" concept, directed by the Office of the Assistant Secretary of Defense (Manpower), emphasized equipment oriented training using essentially rote maintenance techniques. Two "X" type experimental courses were developed and conducted, one for each of two occupational specialties (Aircraft Electronics Navigation Equipment Repairman and Aircraft Control and Warning Radar Repairman).

The "Y" concept, directed by Headquarters USAF, stressed application of electronic principles and de-emphasized specific equipment training. Two experimental "Y" courses were developed and conducted, one for each of the same two occupational specialties for which "X" courses were established. Upon completion of the four experimental courses, graduates were matched with control course graduates and assigned to field units in matched groups where each group worked for the same supervisor.

Five major evaluation steps, embracing the entire first enlistment experience of the graduates, are prescribed by the approved service test plan. Four of the evaluation steps have been completed and reported in ATC PR 66-20; Volumes 1 through 9. A Synoptic Report for Volumes 1 through 7, published 21 May 1968, covers, in question and answer format, the essence of findings from the first three evaluation steps. The final major evaluation step, yet to be completed, is the First Enlistment Termination Survey which will recount and summarize the entire first enlistment experience of the experimental graduates. A final evaluation report is scheduled early in 1970.

Application of Findings/Conclusions:

After more than two years of graduate field experience, findings indicated that training provided in the control (regular) courses is very closely aligned with the needs of field units and is compatible with established unit OJT programs, career development courses and specialty knowledge testing requirements. Field supervisors almost unanimously oppose any reduction in scope and quality of current resident technical training. The shorter service test courses with drastically reduced electronics fundamentals training ("X" courses), while not completely unsuccessful, resulted in several important training deficiencies which contributed to initial and lingering graduate job difficulties. The shorter service test courses which emphasized electronic fundamentals training and de-emphasized specific equipment training ("Y" courses), were more successful than the "X" courses; however, these graduates also encountered substantial difficulties attributable to the inadequacy of their formal technical training. Findings from the Second-Job Proficiency Evaluation tended to further substantiate findings from the Delayed Field Evaluation.

PR 68-3 (2 Volumes)
SYMBOLIC INTEGRATED MAINTENANCE MANUALS (SIMMs) TRAINING TECHNIQUES STUDY, FLIGHT FACILITIES EQUIPMENT REPAIRMAN COURSE NUMBER 3ABR30431Z

Summary:

This training experiment was designed to augment the information obtained from the SIMMs Training Service Test directed by Hq USAF, and to determine the merits of using SIMMs in principles-centered training where graduates may be required to use SIMMs or conventionally "formatted" technical data. Training materials for the 17-week equipment portion of experimental Course 3ABR30431Z included both conventional and SIMMs techniques for data presentation. Thirty-six students were transferred from regular Course 3ABR30431 to the experimental course. Regular "end-of-block" tests were administered to experimental classes when the supervisor judged that the regular course objectives had been achieved. Volume 1, ATC PR 68-3, 15 January 1968, reported the training operations phase and findings of course proficiency evaluation. Experimental students attained substantially the same grades as regular course students and graduated in three weeks and two days less time. A comparative evaluation was made of experimental and control graduates after they had been in field units approximately nine months; the results are reported in Volume 2, ATC PR 68-3, 13 December 1968. No substantial differences were evident in the job performance of the two categories of graduates.

Application of Findings/Conclusions:

Based on the favorable findings of this study SIMMs-type materials were integrated into the regular Flight Facilities Repairman Course 3ABR30431 and the course length reduced by two weeks effective in August 1967.

PR 68-12
(VOLUME 1 OF 2 VOLUME REPORT COMPLETE)
SYMBOLIC INTEGRATED MAINTENANCE MANUALS (SIMMs) TRAINING SERVICE TEST (AN/FPS-27 SIMMs)

Summary:

This program, directed by Hq USAF, is designed to compare the training effectiveness of SIMMs with conventional technical orders, particularly with respect to large ground radar equipment. Two short, equipment-oriented courses dealing with the maintenance of the AN/FPS-27 radar were developed. Conventional technical orders were used as the principal source of training material for the control course. An experimental course, in which a contractor-developed SIMMs constituted the source of training material, was also developed. Approximately 40 students were trained in each course. Experimental students, who used SIMMs both in training and in the field after graduation, were compared with matched students from the control course. In addition to internal evaluation during training, two field evaluations of the graduates were made at key points during the first nine months following graduation. The internal evaluation covering training operations was reported in Volume 1 of the scheduled two-volume report. A final report is scheduled for March 1969.

Application of Findings/Conclusions:

Findings show no substantial differences in the academic achievement of control and experimental students except that the experimental students using SIMMs were able to isolate equipment faults in less time than control students. Evaluation results to date, along with the findings from other SIMMs studies, were reported to the USAF Technical Order Council, Oklahoma City, Oklahoma in September 1968, and later used to revise the Avionics Field Maintenance Specification (formerly Mil-H-25095) to include SIMMs features.

PR 68-16

EVALUATION OF CONTROLLED SELF-PACING TRAINING PROGRAM OF THE ATC STANDARDIZED ELECTRONIC PRINCIPLES COURSE

Summary:

This project report describes the results of a service test of a controlled self-pacing training program for students with exceptional ability and background in the ATC Standardized Electronic Principles Course (ETV) 3AQR30020. Non-prior service volunteers who showed promise of being able to complete the training in approximately half the regular course time and maintain average grades or higher were entered into controlled self-pacing training. Three classrooms were arranged specifically to accommodate this program. Students used the same training literature, viewed the same ETV lessons, performed the same laboratory projects and took the same block tests as regular students. However, each student progressed at a rate commensurate with his ability to learn. It was found that students with exceptional ability and background could "self pace" through the regular ETV course (programmed time 19 weeks) in an average time of 9.22 weeks. They achieved an average standard score grade of 90 in electronic principles and scored significantly higher on an independently constructed end-of-course principles test than did a sampling of students completing the regular or accelerated "lock-step" program. Controlled self pacing students completed specialty training with an overall standard score grade of 89.9. Two-thirds of them met the criteria for honor graduates and one-fourth met the criteria for outstanding honor graduates. Student and instructor attitudes were overwhelmingly favorable toward the program.

Application of Findings/Conclusions:

Controlled self-pacing training has been expanded to three-shift operation and plans are being formulated to enroll up to 20% of student entries in the program. In addition, the concept is being service tested in our computer principles training. Some students completed training in less time than the minimum time in grade required (five months from DOR) for promotion to E-3 (A1C). The report contained a recommendation that the requirements of AFR 39-29 be waived to authorize promotion upon graduation of non-prior service airmen who accelerate through a course of programmed duration of five months (22 weeks) or longer and do not have five months in grade at time of course completion. This recommendation was not favorably considered because it would create an inequity in time in grade for promotion.

PR 68-19

EVALUATION OF ELECTRONIC WARFARE REPAIRMAN COURSE NUMBER 3ABR30133

Summary:

The purpose of this evaluation was to determine the relevance and effectiveness of training provided in Course 3ABR30133. Feedback concerning graduate performance on the job was obtained by means of the field surveys. Questionnaires on 88 graduates were completed by 62 supervisors at 49 different organizations. Findings from this source were supplemented by a modified Job Performance Evaluation (JPE). Fifteen graduates at as many different organizations were rated daily by their immediate supervisors during their first 10 weeks on the job. Reports were provided Keesler on a weekly basis. This modified Job Performance Evaluation was initiated by correspondence rather than a visit to each organization. The telephone was used as necessary to establish and maintain satisfactory communication between the Keesler evaluator and each participating supervisor. Field visits were made to two of the 15 organizations which had participated in the Job Performance Evaluation. A staff review of training in the basic course was conducted. Graduates surveyed were assigned to jobs for which they had been trained and were progressing at a satisfactory rate on the job. Except for the need for greater training emphasis on solid state electronics, training provided in the basic course was found to be both relevant and effective.

Application of Findings/Conclusions:

Additional training on the principles and maintenance of solid state equipment has been provided through a major revision to the course. The initial graduates were realized in April 1968.

PR 68-28

SERVICE TEST OF APPLICABILITY OF DATA AUTOMATION TECHNIQUES TO THE FIELD SURVEY FUNCTION

Summary:

This project was undertaken by the Training Evaluation Division at Keesler Technical Training Center to explore and service test the applicability of data automation to field survey work. The type of questionnaire used in conducting airman basic resident (3ABR) course surveys served as the model for this study with the realization that other types such as those used in evaluating officer and advanced airmen courses would eventually have to be accommodated also. Computer programmer instructors provided required technical assistance and arranged for the use of a computer. (The Aerospace Defense Command AN/FSQ-7 computer at 32 Air Division Headquarters, Gunter AFB, was available to them for programmer proficiency time.) In addition to learning about questionnaire preparation techniques, the role of the card punch operator was studied and observations were made concerning the disadvantages as well as the advantages of automation. A practicable approach to field survey automation was developed and service tested. Findings demonstrated that it is possible to develop a sufficiently flexible computer program to accommodate field surveys of airmen basic course graduates. To achieve this flexibility, however, requires the computer program to be supplemented by the evaluator through the use of control cards. To be practicable the computer program must be optimized to permit required flexibility with minimal control card input.

Application of Findings/Conclusions:

The findings of this service test are being used in developing an ATC data automation proposal in support of the training evaluation function.

PR (Not Complete)

SYMBOLIC INTEGRATED MAINTENANCE MANUALS TRAINING TECHNIQUES STUDY, AIRCRAFT CONTROL AND WARNING RADAR REPAIRMAN COURSE NUMBER 3ABR30332Z

Status Summary:

This training experiment is designed to augment the information obtained from the SIMMs training service test directed by Hq USAF. The project will determine the relative merits of using SIMMs versus conventional material format in principles-centered electronic equipment maintenance training situations where the graduates may be required to use technical data in either format to perform maintenance after graduation. For experimental course, 3ABR30332Z, training material was developed using selected features of the SIMMs format covering the subject areas normally presented in the 21-week equipment portion of Aircraft Control and Warning Radar Repairman Course 3ABR30332. Learning objectives for the experimental course were stated in job related terms and the Plan of Instruction was developed with the intent of optimum exploitation of the SIMMs concept. Four classes (40 students) are being trained under this concept during the period March 1968 through March 1969. To date, three of the four scheduled classes have graduated with the final class scheduled to graduate on 18 March 1969. The first volume of the report, covering internal evaluation, is scheduled for May 1969. The final volume covering a field evaluation of the graduates is scheduled for October 1969.

PR (Not Complete)

SERVICE TEST OF ELECTRONIC COMPUTER PRINCIPLES TRAINING FOR RAPID LEARNERS

Status Summary:

This service test provides an orderly means of accelerating training for approximately one-third of the entering students whose background, training and experience indicate that they should be capable of completing the 18-week Electronic Computer Principles training in 14 weeks or less. Selection criteria have been developed and performance standards have been established. The first students entered the program 2 October 1968 and the last service test group will enter 2 April 1969. As of 18 December 1968, 77 students have been selected from entering classes, two transferred into the program from the controlled self-pacing program and three from the regular course. Fourteen students have been removed from the program. Ten could not maintain the required standard of performance, two requested a transfer to the regular course and two were transferred to the controlled self-pacing program. The first class will complete principles training 7 January 1969 and the first students graduate in July 1969. A final report on the project will include information regarding student achievement of learning objectives, student and instructor reaction to the program, correlation between selection criteria and student achievement, problems peculiar to this type of training, adequacy of resources, and recommended changes to the program if it is to be continued. This project is scheduled for completion in November 1969.

PR (Not Complete)

SERVICE TEST OF CONTROLLED SELF PACING PROGRAM IN COMPUTER PRINCIPLES TRAINING

Status Summary:

This project was established to service test a Controlled Self Pacing Program for exceptionally well qualified students entering the 18-week Computer Principles Course at Keesler. The objectives and procedures being used are similar in most respects to a parallel project tested in electronic principles and reported in the preceding summary (PR-68-16). Keesler Service Test Plan 68-208 was approved by Air Training Command on 26 August and the first students were selected and entered into the program on 2 October 1968. A total of 20 students have been entered, six of whom have completed the course, four were transferred back to the lock-step instruction and ten are still in training. The six airmen who completed the course did so in a mean time of 8. 2 weeks. Service test entries are scheduled to be continued through 2 April 1969. The progress and achievement of each student is being carefully monitored throughout his training. Data are being collected during the service test to evaluate adequacy of selection criteria, student achievement, training time, problems peculiar to the type training and adequacy of resources used in the service test. This project is scheduled for completion in December 1969.

PR (Not Complete)

EFFECTIVE LISTENING

Status Summary:

The purpose of this project is to apply the findings of various research agencies to the development of an effective listening program designed specifically for students entering their initial formal technical training. Current research information was analyzed to develop an initial two-hour audio tape/35mm slide presentation. This program was recorded and tried out on several small groups of typical students. In the refinement process the program was revised and recorded on video tape for use in the installed ETV facilities. The ETV mode of presentation was used to administer the program for validation; the results of which are published in Keesler Validation Report on Effective

Listening dated 4 October 1968. Based on favorable validation results, a service test to determine the extent to which the program would improve student academic achievement was initiated in October 1968. Two experimental groups were used; one received the listening training without controlled practice while the other received the same training followed by control practice. Evaluation data are now being collected and a final report will be published during the 3d quarter FY69.

PR (Not Complete)
SERVICE TEST OF AUDIO TAPE/SLIDE RECORDED LESSONS

Status Summary:

The purpose of this service test is to compare the effect of "traditional" instruction, programmed instruction packages, and recorded audio-visual lessons in terms of learning time, achievement and student motivation. Also, procedures to be used as guides for the preparation of audio/visual recorded lessons will be developed, and a comparison will be made of advantages of cartridge-feed versus reel-to-reel feed tape equipment. The project is also expected to provide a base of information for comparing the cost of tape/slide recorded lessons with the cost of other methods of instruction. Typical recorded lessons are being prepared by four different training agencies at Keesler. Training will be conducted using these lessons in controlled situations to accomplish the objectives of the project. Unexpected delays and difficulties have been encountered in this project due to equipment problems, project personnel illnesses, and training program revisions. For this reason, this program is now under review for possible replanning and direction.

PR 68-22

RESIDENT TRAINING REPORT, COURSE 3ABR81130, SECURITY POLICEMAN (PROJECT 100,000)

Summary:

This report summarizes the course modifications and changes for Course 3ABR81130, Security Policeman. These changes were made to enhance the training of New Mental Standards (NMS) Airmen in this course. In addition, an analysis was made showing the reasons for all eliminations and discharges. Comparisons were made between NMS eliminees and graduates, as well as with a sampling of other than NMS Airmen. The information in this report was obtained from administrative records and reports. It was found that for the most part the NMS Airmen could be trained in the course; however, the elimination rate was considerably higher than for other students. Airmen in the 10-15 AFQT Category had the highest elimination rates. It was determined that additional remedial instruction, recycling and counseling was beneficial in reducing the elimination rate. Some changes in the curricula and measurement areas were desired.

Application of Findings/Conclusions:

Additional emphasis was placed on remedial instruction, recycling, counseling, and minor changes were made in the curricula and measurement areas. A voice communications trainer is being developed for use in the course. This trainer will be available in the fourth quarter of FY69.

PR 68-31

TEST GRADUATE EVALUATION REPORT (3ABR81130, SECURITY POLICEMAN, PROJECT 100,000)

Summary:

This project report is a summation of the findings obtained from correspondence questionnaires and field visits. The purpose of this evaluation was to determine the adequacy of the training program to train New Mental Standards (NMS) Airmen in the Security Policeman Career Field. Information was obtained from 225 correspondence questionnaires and visits to 32 Air Force Bases, where 70 NMS graduates were interviewed along with their supervisors. The analysis of the information obtained indicated that, for the most part, the NMS graduates were performing satisfactorily and the using activities were satisfied with the graduates. Results from correspondence questionnaires indicated that 7.8% were rated outstanding, 88.3% satisfactory, and 3.9% unsatisfactory.

Application of Findings/Conclusions:

As a result of this study, it was recommended that NMS Airmen continue to be assigned to Course 3ABR81130, Security Policeman.

PR (Incomplete)
SUMMARY COST ANALYSIS REPORT
(COURSE 3ABR81130, SECURITY POLICEMAN, PROJECT 100,000)

Status Summary:

The purpose of this report is to summarize the additional costs incurred as a result of training New Mental Standards (NMS) Airmen in the Security Policeman Course, 3ABR81130. The additional costs incurred were in the areas of personnel, equipment, supplies, TDY, and extended training time. Based on 555 NMS entries, the total additional cost amounted to $114,430.48. This represents cost of $206.18 more for each NMS Airmen than for other airmen. A considerable amount of the initial cost will not be required on a continuing basis. Since additional instructors were used for only three months of the period of the report, the cost of instructor personnel will increase. The overall per capita cost for training NMS Airmen should increase as the cost of additional instructors will more than offset the cost of initial preparation, which will not be required in future training. A final analysis should be completed during July 1969.

PR 68-25

PROJECT 100,000 TEST GRADUATE EVALUATION INTERIM REPORT

Summary:

The purpose of this project was to summarize and present preliminary data showing how well New Mental Standard (NMS) airmen who are graduates of technical training courses conducted by the 3750th Technical School can perform when assigned to duty in field organizations throughout the Air Force. At the time the interim report was prepared (1 September 1968), the 3750th Technical School had graduated 1170 NMS airmen from 18 courses. Of these, 390 graduates were contacted by mailed questionnaires, and 121 graduates were contacted through field visits to their units of assignment. Preliminary findings as reflected in the interim report indicate that most NMS airmen who graduate from technical training courses are performing in a satisfactory manner; however, as was the case in technical school, they require and are given more help than the average airman. The percentage of airmen graduates whose overall job performance was rated "Unsatisfactory" by their immediate supervisors in the field was considerably higher for NMS airmen than it has been for other graduates of most courses involved.

Application of Findings/Conclusions:

Where sufficient NMS graduates of a course had been surveyed in the field to give meaningful data, the interim report contained recommendations that NMS airmen continue to be entered into the specific courses pending completion of a final report due in October 1969. These recommendations are currently being implemented.

PR 68-26

EVALUATION OF RECIPROCATING ENGINE MECHANIC COURSE 3ABR43231

Summary:

This evaluation was conducted to determine ability of course graduates to perform duties of their specialty, utilization of training and effectiveness of course training in meeting objectives outlined by the course control documents. The evaluation was based upon data obtained from a job performance evaluation, mailed questionnaires, field visits, interviews with newly assigned instructors, and internal evaluation projects. The graduates had been assigned on a wide variety of reciprocating engines and were adequately trained to perform the duties of their specialty. Fifty per cent were performing duties at the 5-skill level and 50 per cent were performing at the 3-skill level. Graduates participating in the job performance could perform all assigned tasks at or above the Specialty Training Standard (STS) proficiency code level by the end of the second week. Supervisors completing questionnaires reported 100 per cent utilization of training, ranging from 24 per cent on one task to 100 per cent on seven tasks. They rated the proficiency of 80 - 100 per cent of the graduates at or above the STS course code level on 92 per cent of the job tasks. Internal course operation was excellent. Training objectives were being effectively accomplished as outlined by the course control documents. Latrine facilities were inadequate and modifications to prevent engine exhaust gases (carbon monoxide) from entering the ventilation system of the engine run up trailers were needed to insure student safety.

Application of Findings/Conclusions:

The relevancy of course curriculum to requirements of the using organizations indicates no tasks should be deleted from the course training. New latrine facilities have been built and ventilation system of the engine run up trailers has been modified for student safety.

PR 68-27
TRAINING OF AFSC's 607X0 PERSONNEL

Summary:

This evaluation was conducted to appraise the effectiveness of the total training program for AFSC's 607X0, Aircraft Loadmaster. Scope included basic Course 3ABR60730, 17 Type 4 field training courses, Career Development Course (CDC) 60750, and Type 5 Course 5AZA60751 (Joint Airdrop Certification). Findings were based on analysis of mailed questionnaires completed by 65 basic course graduates' supervisors, 36 graduates of Type 4 Course 4AFF60730-1 (ANG and Reserve), 44 squadrons using Type 4 course graduates, and four Course 5AZA60751 graduates. Results were substantiated by field visits to four MAC bases and one TAC base to interview loadmaster trainers and trainees. Findings showed Course 3ABR60730 graduates progressed satisfactorily in the user loadmaster qualification program. Field training courses are an important part of this qualification and need only a few changes to meet current user training needs. The CDC in use, dated April 1966, was causing airmen upgrade problems due to obsolete and equipment specialized material. It has since been replaced by a revision activated in December 1968. The limited available data indicated that Course 5AZA60751 is very beneficial for personnel performing cargo inspection and acceptance for airlift.

Application of Findings/Conclusions:

Actions are planned to update some field training courses to current user needs. Missile and nuclear weapon training is being deleted from the aircraft courses as few personnel need this training which is still available in Course 4AFF60770-6, Hazardous Cargo Air Transportation. Restraint rail training will receive special consideration of current needs during annual review of C-130 and C-141 courses. C-97 and C-118 courses are being deleted, and major command coordination is being accomplished to determine current requirements for Course 4AFF60770-7, Aircraft Field Load Planner. An evaluation is planned on the revised CDC 60750 after it has been in use approximately six months.

PR 68-33
AIR PASSENGER COURSE 3ABR60530

Summary:

This evaluation was conducted to determine if Course 3ABR60530 provides the apprentice training specified by Specialty Training Standard (STS) 60530/50 and whether the STS accurately describes the training necessary for an apprentice to perform in this specialty. Findings were based on analysis of information obtained by the job performance ratings of ten course graduates during the first six weeks of their initial job assignments at two MAC aerial ports. Assignments were five to Passenger Processing, three to Fleet Service, one to Lost Baggage, and one to Traffic Analysis. All graduates were performing their tasks at the STS specified proficiency level prior to the end of the evaluation period. Supervisors rated as inadequate the initial performance of those assigned to Fleet Service. Some tasks performed in Fleet Service and Passenger Processing were not clearly identifiable in the STS. Additional feedback data were obtained by use of a mailed questionnaire containing the identical tasks used in the job performance evaluation. Supervisors used this questionnaire to rate 62 selected graduates after they had been on the job approximately four months. This data generally correlated with that obtained from the job performance.

Application of Findings/Conclusions:

Course instruction on Fleet Service tasks is being revised to provide more job realism and to increase training retainability. The currently non-listed STS tasks performed by the apprentices will be added for the next major command STS coordination.

PR (Not Complete)
PROJECT 100,000 DDA/CDC SURVEY

Status Summary:

This survey is being conducted to determine the upgrade progress being made by New Mental Standard (NMS) airmen who were given Direct Duty Assignments (DDA's) in AFSC's for which the 3750th Technical School at Sheppard AFB has responsibility for preparing Career Development Courses (CDC's). In the accomplishment of this survey, special emphasis is being placed on the evaluation of the adequacy of CDC's to meet the needs of the NMS airmen. As of 1 December 1968, a total of 707 test airmen had been assigned to duty in the field. Preliminary findings covering a limited number of these airmen have been developed for several AFSC's where the number of assignees surveyed was sufficient to give significant data. These preliminary findings indicate that most NMS Direct Duty Assignees can perform satisfactorily in field duty assignments when given special assistance by their immediate supervisors. Most field organizations are conducting formal classes to aid newly assigned airmen in completing their CDC assignments and tests. The principal reasons for unsatisfactory performance by NMS airmen fall in two main categories: slow learning ability and poor attitude toward their work assignments. These preliminary findings are subject to revision as more data are obtained from field organizations. The survey is scheduled for completion in May 1969, at which time a final report of findings will be published as ATC Project Report No 69-1.

PART II

(NOT COMPLETE)
TEST PARTICIPATION (MINUTEMAN)

Status Summary:

No changes for Minuteman courses were made as a direct result of Category Test Program information during the past six months. However, the scope and depth of instruction have been improved by items furnished by the test team. These items include revised technical order procedures, furnishing of test reports, review of operational problems, etc. The test team has provided training support to mobile team instructors conducting courses at Vandenberg. They have also provided training support for type 1 contractor courses conducted at Vandenberg AFB and have evaluated these courses. Members of the test team were members of the central technical order control unit board, Minuteman equipment and procedures review boards, and were invited observers of all Minuteman test activities.

CATEGORY II TESTING OF 487L SLFCS

Summary:

An evaluation was conducted to validate the follow-on training requirements to support the 487L Survivable Low Frequency Communications System (SLFCS). The system is intended to augment and re-enforce allied post attack communication systems whereby CINCSAC may be assured of a command and control channel to his dispersed forces under attack and post attack conditions. Training provided by contractor conducted Courses 1ASC30454-59 (Transmit/Receive Site Training), and 1ASC29150-4 (Airborne Trailing Wire Antenna Operator Training) were evaluated, along with Air Force training Courses 4AMF30454-4 (Ground Receiver F/O Maintenance), 4AMF30454-5 (Ground Receiver Organizational Maintenance) and 4AMF30454-6 (Ground Transmitter Maintenance) conducted by traveling team. Field visits and data collection were made at the test site, March AFB, CA on the airborne segment and data collection was accomplished via correspondence on the ground segment. Factors considered were course training standards, training materials, training equipment, personnel selection criteria and adequacy of contractor conducted training. Category II testing of the ground segment was completed June 1968. Course 2ASR30150-61 (AN/ARC-96 Maintenance) is being conducted at Keesler Technical Training Center and is part of the airborne segment.

Application of Findings/Conclusions:

All factors of the contractor courses were considered adequate for use in follow-on training. Courses 4AMF30454-4, 4AMF30454-5 and 4AMF30454-6 are now being conducted by Field Training Detachment 432K, using the course training standard which was validated during Category II Tests.

CATEGORY II TESTING OF FORWARD AIR CONTROL POST (FACP) ELEMENT, 407L TACS

Summary:

An evaluation was conducted to validate the follow-on training requirements to support the Forward Air Control Post Element, 407L Tactical Air Control System. The FACP Element program provides capability to detect and maintain surveillance of aircraft; to provide limited control or assistance to aircraft through the use of radar displays and ground-to-air radio communication. Training provided by contractor conducted course 1ASC30372-15 (AN/TPS-44 Radar) was evaluated. Field visits and data collection were made at the test site, Eglin AFB, Florida. Factors considered were course training standards, training materials, personnel selection criteria, training equipment, background questionnaire, graduate performance, and adequacy of contractor conducted training. The evaluation was completed in November 1968.

Application of Findings/Conclusions:

Contractor training was considered adequate for use in follow-on training. Follow-on training was conducted by a travel team.

CATEGORY II TESTING OF 474N MISSILE WARNING DETECTION SUBSYSTEM(MWDS)

Summary:

An evaluation was conducted to validate the follow-on training requirements to support the 474N Missile Warning Detection Subsystem of the 474N Sea Launched Ballistic Missile System. The subsystem will accept and display missile warning and site status data originating at BMEWS, SLBM and 440L Radar Sites. Training provided was Air Force conducted special training Course 2ASR30551-33 (MWDS F/O Maint). A field visit was made at the test site, Ft Ritchie, MD and data collection was accomplished via correspondence. Factors considered were personnel selection criteria, training materials and instruction. Category II Testing was completed November 1968.

Application of Findings/Conclusions:

All factors of the Air Force conducted course were considered adequate for use in follow-on training.

CATEGORY II TESTS OF AN/FPS-85 PHASED ARRAY RADAR

Summary:

An evaluation was conducted to validate contractor training provided to support the AN/FPS-85 Phased Array Radar. The AN/FPS-85 was designed and built to detect and track missiles and satellites in support of the national space defense effort. Field visits and data collection were made at the test site, Eglin AFB, Florida. Factors considered were personnel selection criteria, graduate performance, and course training standards. The test was completed in September 1968.

Application of Findings/Conclusions:

Revised job task and knowledge lists were furnished site personnel for use in the OJT program since no follow-on training will be conducted. Contractor training was considered adequate for normal progression to full job qualification through a comprehensive OJT program.

CATEGORY II TESTING OF 484N(B) COMMUNICATION SYSTEM

Summary:

An evaluation was conducted to validate the follow-on training requirements to support the 484N(B) Kanto Plains Communication System. The 484N(B) program will update the existing communications network into a more reliable, modern, high quality communication network responsive to the U. S. Military Communication requirements in the Kanto Plain area. Training provided by contractor conducted Course 1ASC30470-2 (Kanto Plains Microwave Equipment (NEC) F/O) was evaluated. Field visits and data collection were made at the test sites of Yokosuka, Totsuka and Kamiseya, Japan. Factors considered were course training standards, training materials, personnel selection criteria, training equipment, and adequacy of contractor conducted training.

Application of Findings/Conclusions:

All factors of contractor conducted course were considered adequate for use in follow-on training. Follow-on training is now being conducted by Field Training Detachment 913K, using the course training standard which was evaluated during Category II Tests. Minor revisions have been made in the sequence, time allocation and subject titles within each block.

CATEGORY II TESTING OF 416M BACK UP INTERCEPTOR CONTROL III (BUIC III)

Summary:

An evaluation was conducted to validate the follow-on training requirements to support the Back Up Interceptor Control III System, 416M. The BUIC III site is able to centrally control air defense within its assigned area of responsibility. Training provided for programmers, operators, and maintenance personnel by ATC conducted courses was evaluated. Field visits and data collection were made at the test sites of Hanscom AFB, MA and Ft Fisher AFS, NC. Factors considered were course training standards, personnel selection criteria, and adequacy of training. Test was completed in December 1968.

Application of Findings/Conclusions:

All ATC conducted courses were considered Adequate. Course 2OSR0123-3 (BUIC III Computer Programmer) requires further internal and field evaluation to determine whether recommended changes to the Course Training Standard are valid. This will be accomplished during the CY69 Evaluation of this training scheduled in Keesler Plan 68-157.

PR (Not Complete)
F-4E CATEGORY II TEST PROGRAM

Status Summary:

The Category II Test Program has been extended from 31 March to 31 December 1969. The program was extended to allow additional testing of the Weapons Release Control and Weapons Delivery Systems. Testing has been successfully completed or is progressing satisfactorily on a majority of the aircraft systems. The verification of technical data on the AN/APQ-120 Radar System has not been entirely satisfactory. This has been due to lack of maintenance activity on the radar set, and slippage in the delivery schedule of technical data from the contractor. An evaluation of Mobile Training Set #10 was conducted at Eglin AFB. The conclusions indicated that the training equipment generally supported the training objectives of the F-4E program. Specific findings of this report will be included in the ATC Category II Final Report.

PR (Not Complete)
F-111A CATEGORY II TEST PROGRAM

Status Summary:

F-111A Category II Test program was monitored to determine additional training implications. Category II Test program is estimated as being 85% complete. However late changes in configuration of the aircraft which are not at the Flight Test Center and added program requirements will extend the Category II program to approximately 1 Oct 1969.

PART III

ADJECTIVE GRADING IN TYPE 3 TECHNICAL TRAINING COURSES

Summary:

This evaluation was conducted to compare the number of "Outstanding Honor Graduates" and "Honor Graduates" recognized during fiscal year 1968 under the individual course's adjective grading system with the number of students who would have received such recognition if the Rank Order Chart (Attachment 1, ATCR 52-3) had been used. Findings revealed that there were no "Outstanding Honor Graduates" recognized during this period by any of the 19 type 3 officer and airmen courses utilizing adjective grades. Also, the majority of the courses using adjective grades do not recognize as many "Honor Graduates" as is permissible by current ATC directives. There was one course (3OZR1515J) recognizing an excessive number of "Honor Graduates."

Application of Findings/Conclusions:

Training Operations Branch will investigate the lack of "Outstanding Honor Graduates" recognized by courses using the adjective grading system. Course 3OZR1515J measurement program is to be revised so as to make it more discriminatory.

PROJECT ONE HUNDRED THOUSAND--TASK 8d

Summary:

Additional support to this program was provided with the inclusion of six additional courses under phase II. A summary of changes to the six Category B courses (which had been previously accepted under phase I) was submitted to include implementation dates of long-range changes, budget requirements to support the recommended changes, and additional courses for consideration under Project 100,000.

Applications of Findings/Conclusions:

These six courses were reviewed, and the modifications required to accept New Mental Standard students were accomplished. Phase II of the project was completed in October 1968.

"SELF-PACING" COURSE 3AAR42173
AEROSPACE GROUND EQUIPMENT REPAIR TECHNICIAN

Summary:

Since 12 July, a service test of Course 3AAR42173 was conducted with the ultimate goal being individual self-pacing of 5- and 7- level personnel according to their individual abilities. To progress toward the ultimate goal of individual self-pacing, small group pacing was initiated by dividing the classes into sections and placing these small groups according to their background experience, education and ability. A graduate evaluation of the small grouped paced course (Chanute PR 68-212) indicated this version of the course was an unqualified success. During the period the small group paced course was being successfully conducted, new programmed texts were developed and new training films and new training aids were procured. Individual self-pacing was then implemented. Maximum use of the remedial instruction period permitted acceleration of instruction and practical work on equipment. Students completed the 11 week course in an average time of 7 weeks and 4 days. Evaluation of the individual self-paced course consisted of a review of student critiques, individual interviews with students after completion of training and an assessment of the program by the course supervisors and the instructors involved. Students were very critical of the individual self-paced approach and both course supervisors and instructors were generally unhappy with the individual self-paced approach. The course reverted to the small group paced system. The service test terminated in December 1968.

Application of Findings/Conclusions:

Small group pacing proved to be more effective than individual self-pacing for this "7" level technicians course. The training documents for the small group pacing approach are being finalized for forwarding to ATC Hq during the 3rd quarter FY 1969.

ACCELERATED TRAINING COURSE 3ABR92230
PROTECTIVE EQUIPMENT SPECIALIST

Summary:

Accelerated training, or "multi-track" training, in Course 3ABR92230 was designed for highly qualified students based upon a general knowledge pretest, instructor evaluations, and achievements in Block I of the course. Students selected received accelerated training in Block V during remedial instruction periods of 1--1/2 hours per day concurrently while attending Blocks II and III in the morning. Consequently, students on accelerated (fast-track) training complete the 9 week course in 7 weeks resulting in a savings of 2 weeks per student. Since the program was implemented on 26 April 1967, 152 students (five college graduates) have completed the course with a savings of 311 man weeks. Field evaluation of students with high learning abilities was completed 10 July 1968. Findings and conclusions indicate the course is providing adequate training.

Application of Findings/Conclusions:

Course control documents are being revised to include multi-tract/fast-track for highly qualified students entering the course. These documents are planned for submission to ATC Hq in February 1969.

PROJECT ONE HUNDRED THOUSAND, RESEARCH FUNDS CDC WRITER TRAINING PROGRAM

Summary:

Project was to provide ATC with outside assistance in writer training for preparation of training materials for use by New Mental Standard airmen under Project 100,000. A Statement of Work for proposed Course ATC 75100, Design and Production of Career Development Course, was submitted to ATC for review 11 July 1967. This proposal was forwarded to DOD for funding.

Application of Findings/Conclusions:

A Technical Writer Course Workshop for ATC technical training centers was established by ATC (ATTSE-C) letter, 9 December 1968. Purpose of the workshop was to establish a formal course to be conducted by the Instructor Training Branch (ITB) at each Center providing in-house capability for training course writers. The course will be announced in AFM 50-5, USAF Formal Schools Catalog.

STUDY FOR SLOW AND FAST LEARNERS IN ELECTRONICS

Summary:

This study, initiated during the latter part of 1966, was continued with changes in emphasis to assist the slow learner by early identification, use of programmed instructional materials, more individualized remedial instruction, and use of daily tests. Most recently, with the increase in the number of college graduates entering technical training, our effort was expanded to determine possible acceleration methods that would afford these students an opportunity to progress through the Electronic Principles portion of their training in less than the normal time.

Application of Findings/Conclusions:

Implementation of this program has resulted in a reduction of student eliminations by approximately 51%. Through November 1968 there have been 101 students proficiency advanced, resulting in 985 student training days saved.

Prior to making the decision that a student be allowed to proficiency advance, it must be determined that an entering class will be available for the accelerated student to enter the SETS portion of training upon completion of Electronic Principles. This does not create much of a problem in a high-flow course with a 1- or 2- week entry interval. However, for courses with irregular entry intervals or extended periods between entries, the situation is considerably more difficult and could result in the student being placed in PATS between graduation from Electronic Principles and entry into the SETS portion of training. This has restricted the proficiency advancement program to some degree since it is believed to be to the student's advantage to keep in training rather than PATS.

SOUND SUPPRESSION FOR ENGINES MOUNTED ON SEMI-PORTABLE TEST STANDS

Summary:

All engines currently installed in the test stand complex have sound suppressors attached and are in operational status. The J33 engine in the 20,000 lbs. Shaw-Estes test stand has a modified A/M32A-5 suppressor installed. The J57 engine in the M37-T-6 test stand has an A/M32A-10 suppressor installed. The J57 engine in the M37-T-1 test stand has an A/M32A-52 (prototype) suppressor installed. The AF37-T-4 test stand has been dismantled and turned in.

Application of Findings/Conclusions:

Operation of engines on test stands no longer disrupts instruction in adjacent training areas (900 Training Area). The suppressors have reduced the noise level to where ear damage or noise harassment are no longer a problem to personnel.

(Not Complete)

READABILITY OF TECHNICAL TRAINING MATERIAL PRESENTED ON MICROFILM vs OFFSET COPY

Status Summary:

This Human Resources Laboratory study is being conducted under contract by the Vocational and Technical Education Department at the University of Illinois. The project will investigate the relative effectiveness of presenting technical training materials as black-on-white offset copy, on microfilm with positive image, and microfilm with negative image. Technical materials to be evaluated are schematics, diagrams, charts, tables, graphs, and symbology. Offset copy materials were pretested during December 1968. Completion of the study is scheduled for 1 July 1969.

(Not Complete)

ADJUNCT PROGRAMMING

Status Summary:

This study being conducted with the Human Resources Laboratory was initiated on 1 November 1968. The study will investigate the effectiveness of supplementing study guides with adjunct programmed materials. Study materials from Course 3ABR47330, Vehicle Repairman, are being converted to adjuncted format. Pretesting for validation of the programmed materials will begin in February 1969. Completion of the initial study is scheduled for June 1969.

(Not Complete)

CAREER DEVELOPMENT COURSE WRITER SELECTION CRITERIA

Status Summary:

This study is a joint project with the Human Resources Laboratory and was initiated on 1 November 1968. The characteristics of skilled Career Development course writers will be identified and a test developed predictive of future performance on the job. Preliminary tests designed to measure knowledge of basic writing skills are under development. The completion date for this project has not yet been established.

(Not Complete)

FIELD EXPERIENCED vs NON-FIELD EXPERIENCED INSTRUCTORS

Status Summary:

This study being jointly conducted with the Human Resources Laboratory was initiated on 1 November 1968. The objective of the study is to determine the optimum combination of field experienced and non-field experienced instructors in technical training. Historical data and supervisory and peer ratings are being obtained on both groups to determine criteria which may indicate the field experience factor. Completion of the initial phase of this study is scheduled for April 1969.

(Not Complete)

MEMORY TRAINING

Status Summary:

The Memory Training study, a joint project with the Human Resources Laboratory, was initiated on 1 November 1968. Experimental texts to provide training in mnemonic techniques are being developed by the University of Cincinnati and the Human Resources Laboratory. The completion date for this project has not yet been established.

(Not Complete)

APPLICATION OF INSTRUCTIONAL SYSTEMS DEVELOPMENT TO BLOCK IV COURSE 3ABR25231, WEATHER OBSERVER

Status Summary:

A development plan to apply the systems approach to Block IV, Course 3ABR25231, was approved by ATC (ATTSE-C) 24 September 1968. The purposes of the project are to tailor the final block to individual needs and capabilities of each student and to provide department personnel with experience in instructional system development. Initial tryout results indicate students are able to accomplish the allotted 4-week training in 2 to 3 weeks.

(Not Complete)

APPLICATION OF INSTRUCTIONAL SYSTEMS DEVELOPMENT TO COURSE 3ABR42133, AEROSPACE GROUND EQUIPMENT REPAIRMAN

Status Summary:

A development plan to apply the systems approach to the 3ABR42133 course was approved by ATC (ATTSE-C) 24 September 1968. Initial effort will be to self-pace the last block of instruction; and if successful, attempt will be made to self-pace other blocks. Experimentation with group-pacing will also be tried.

(Not Complete)

"SELF-PACING" COURSE 3ABR42231, AIRCRAFT ENVIRONMENTAL SYSTEMS REPAIRMAN

Status Summary:

The pre-production plan for 3ABR42231 was approved by ATC in May 1967. Block I and Block IV small group tryouts have been successfully completed. A need for revision of some of the written materials was noted, and the required revisions are being made. A need for a slightly different sequence of lessons was apparent, and resequencing is in progress. The target date for full implementation of this self-paced course is 1 July 1969.

(Not Complete)

APPLICATION OF INSTRUCTIONAL SYSTEMS DEVELOPMENT TO COURSE 3ABR42330, AIRCRAFT ELECTRICAL REPAIRMAN

Status Summary:

A development plan to apply the systems approach to Course 3ABR42330 was approved by ATC (ATTSE-C) 24 September 1968. The purpose of the project is to design a completely self-paced, student-centered course. Two blocks of the six-block course have been completed and are in the validation stage. The remaining blocks vary from 6% to 83% in completion for validation.

(Not Complete)

APPLICATION OF INSTRUCTIONAL SYSTEMS DEVELOPMENT TO BLOCK I COURSE 3ABR43230, JET ENGINE MECHANIC

Status Summary:

A development plan to systematize the first block of the course utilizing the "Media Master" teaching media was approved by ATC (ATTSE-C) 24 September 1968. Request to purchase equipment is pending.

(Not Complete)

CDC 57100, FIRE PROTECTION SPECIALIST
(MULTI-MEDIA)

Status Summary:

The production plan for CDC 57100 was approved in November 1968. Programmed materials will be prepared for trainees with learning difficulties. Simple graphic equipment will be used to clarify complex material written on equipment in the Fire Protection Career Field. Tryouts of materials will be conducted with target population students at Chanute and in the field. Scheduled completion date for materials development is 1 February 1970.

(Not Complete)

SUPER 8MM MEDIA SERVICE TEST

Status Summary:

The Super 8MM Media Service Test, in support of technical training, was implemented at CTTC on 1 June 1968. The areas within technical training to be studied for the adaptability of super 8mm films include self-pacing, traveling team, field training, and resident training (other than self-pacing).

Experiments within the service test will include color film productions with complete scripts or outline scripts or no scripts with or without sound.

Progress to date includes the completion of 16 scripts, 10 shootings, and one film ready for classroom use. Completion of the service test is scheduled for December 1969.

SERVICE TEST OF PRETEST-POSTTEST METHODS OF EVALUATING INSTRUCTION AND MEASUREMENT PROGRAMS

KEESLER 68-202

Summary:

The purpose of this service test was to determine the effectiveness of using the pretest-posttest method to improve measurement and related instruction. The project was accomplished in three ABR courses conducted by the Operator Department. Written tests for three blocks of instruction in each of the courses were administered to a sampling of students in a pretest-posttest situation. The data obtained on the individual test questions were analyzed to determine if the pretest-posttest method provides an improved technique for identifying prior knowledge of students entering poor test construction and/or weak instructional areas. The average pretest scores for all students reflected normal guess factor results with little prior knowledge of the subject matter. The average posttest results showed significant gains for all students and a direct correlation with the current average item difficulty indexes of the tests used. An item analysis of test results in one course revealed a few questions answered correctly by all students. These items also correlated with the current DI statistics as having a high ease index.

Application of Findings/Conclusions

The results of this service test validated the pretest-posttest method of evaluating the measurement program but failed to reveal test weaknesses not readily detected by the current methods of test analysis. The technique should be used as an additional tool for analyzing measurement programs with known or suspected problems.

EVALUATION AND IMPROVEMENT OF PERFORMANCE PROJECTS IN ELECTRONIC PRINCIPLES TRAINING

KEESLER 68-205

Summary:

A recent Keesler study showed that a pretest-posttest-retention test technique is one valid method for evaluating the effectiveness of performance projects used in support of electronic principles training. A follow-on investigation revealed that a carefully prepared questionnaire completed by several well qualified instructors can also be used for this purpose with a high degree of confidence where consensus is indicated. Such a questionnaire, when properly designed, is less expensive and time consuming than the former method. Consequently where a large number of performance projects requires review, it is best to use a combination of the two methods. The former method should be used only when a consensus is not indicated by the questionnaires.

Application of Findings/Conclusions:

Using this approach, 40 performance projects supporting Course 3AQR30020, ATC Standardized Electronics Principles (ETV), have been evaluated. Action is being taken to improve or replace projects based on evaluation findings. The results of the follow-on study are reported in Keesler Report 68-205, 29 November 1968.

SUMMARY REPORT OF EVALUATION OF SYMBOLIC INTEGRATED MAINTENANCE MANUALS (SIMMs) IN A TECHNICAL TRAINING ENVIRONMENT

KEESLER 68-209

Summary:

Findings from several SIMMs service test projects are summarized in this report. Each of the service tests included in the summary was previously reported separately in more detail. Evaluation data consistently indicated that SIMMs materials, if developed according to specifications, are an improved method of presenting technical data in an electronics maintenance training environment. In highlighting principal findings and conclusions, this report identifies advantages, disadvantages, and improvements found appropriate for the SIMMs technique. It also contains specific recommendations that the SIMMs concept be adopted as an official format for future technical orders but cautioned that there is a need for improved specifications and careful selection of SIMMs developers.

Application of Findings:

Data summarized in this report were presented to the USAF Technical Order Council which convened in Oklahoma City, Oklahoma in September 1968. In addition, it was later used as a source of information having a significant influence on a revision to the Avionics Field Maintenance Specification (formerly Mil-H-2509) which included the addition of SIMMs features.

SYMPTOMATIC PRESENTATION OF MAINTENANCE INFORMATION

Summary:

In connection with Keesler's interest in the Air Force Technical Order Improvement Program and its potential effects on technical training, considerable effort was given to developing a system of maintenance data presentation which isolates, on identifiable diagrams, those circuits (and hardware elements) that support specific observable equipment symptoms of proper or improper operation. This system, dubbed Symptomatic Presentation of Maintenance Information, exploits many of the features of the Symbolic Integrated Maintenance Manuals (SIMMs) format but incorporates certain improved characteristics. The symptomatic arrangement of circuits evolved from the SIMMs functional arrangement much as the latter evolved from the chassis-oriented arrangement of circuits in conventional technical orders.

Application of Findings/Conclusions:

Stringent local manpower limitations restricted the extent to which this system could be developed and tested; however, rough drawings were made which illustrated the application of the concept in a typical airborne radar. Sufficient favorable reaction was received to warrant recommending its features to the USAF Technical Order Council which convened in September 1968 in Oklahoma City, Oklahoma. Later, the features of the system were incorporated in a revision to the Avionics Field Maintenance Specification (Formerly Mil-H-25095) for technical data.

AN INVESTIGATION OF TRAINING TIME FOR ACCELERATED STUDENTS

Summary:

Does the practice of homogeneous grouping of the fast learners and accelerating their training result in a real savings in training time? If so, how much and is it of sufficient magnitude to continue the practice? These questions are logical ones, for if time gained through acceleration is lost by our inability to assign graduates to jobs promptly after they graduate or by delays after the completion of electronic principles in entering them into specialty training, then we might be following a "hurry up and wait" policy in continuing our practice of using multi-track training. This investigation was conducted to seek the answer to these questions. Time from entry into training until shipment off-base was determined for 100 graduates of each accelerated track for two courses and compared with a sampling of graduates of the corresponding programmed track, who completed training during the same time period. Comparisons were made of (1) time enrolled in electronic principles (includes commander's week), (2) time lapse before entry into specialty training, (3) time to complete specialty training, (4) time between graduation and base departure for job, and (5) total time.

Application of Findings/Conclusions:

This investigation revealed that training time saved by providing accelerated training for rapid learners is real, not imaginary for the two programs studied (9.6 weeks for one course and 4.6 weeks for the other). The formation of accelerated classes as students enter their specialty training is being well managed with practically no loss of time over that programmed for leave after completion of principles training. Students are being "washed ahead" in sufficient time for personnel to procure student assignments. Over two-thirds of the graduates from both regular and accelerated tracks depart Keesler the day of or day after graduation. There is no evidence that assignment delays were caused by accelerated training.

REFINING TEST ITEM POOL OF 3AIR75100-X, ATC STANDARDIZED TECHNICAL INSTRUCTOR COURSE

Summary:

At the request of Hq ATC (ATTSE-E), a plan was developed to evaluate and improve the test item pool of the ATC Standardized Technical Instructor Course. The plan provided for the rating of each question in terms of content validity and job relevance by Instructor Training Course personnel and selected technical training instructors at each Center. During the ATC Instructor Training Conference conducted in August 1968 it was determined that an updated task analysis of the technical instructor's duties/methods was required prior to validating or revising the course objectives. Since it is anticipated that many of the course objectives may be changed due to the current application of new instructional methods/techniques, it was deemed inappropriate to evaluate the test items' validity against these current course objectives.

Application of Findings/Conclusions:

The methods and procedures proposed by the plan will be used in selected cases when training centers disagree on questions or test items used in block tests or master validation examinations.

FIELD EVALUATION OF CAREER DEVELOPMENT COURSES

Summary:

During the first two quarters of FY69 evaluations were completed on 17 Career Development Courses. Evaluation objectives included a determination of the relevance, adequacy and currency of material included in the courses for upgrade training; the effectiveness of the courses for self study; and overall user satisfaction with the materials. Information obtained from 929 questionnaires completed by field units and visits to 34 organizations using the courses in their upgrade training was used for analysis in meeting evaluation objectives. Findings, in general, indicated that the Career Development Courses are effective in fulfilling their role in the upgrade training program. Many good suggestions were obtained from field units for improving second generation CDCs as the original versions are revised. In a few cases, evaluation results indicated a need for prompt action to revise the course, issue amendments and/or supplementary material.

Application of Findings/Conclusions:

Findings were critiqued with CDC writers and appropriate curriculum specialists of departments and the Curriculum Branch of Operations. Detailed suggestions and comments received from the field organizations were transmitted to CDC writers for validation and use during the next revision of the courses.

SERVICE TEST OF A NEW TECHNIQUE FOR CRITIQUING EXAMINATIONS

Summary:

The spring 1968 issue of the USAF Instructor Journal, pages 42-44, contained an article titled "A Fresh Approach to Examination Critique." This center has applied the suggested approach in several training activities to determine if student learning can be enhanced and if additional evaluation data can be obtained from students during the block examination critique. The study was conducted immediately after the block examination had been completed. Students were formed into groups to conduct a discussion of the examination items in an attempt to resolve the correct response. Opinions were obtained from students/instructors/supervisors and training specialists in the following areas: (1) effect on reinforcement of student learning, (2) evaluation data obtained, (3) influence on instructor and student motivation, (4) difficulty of test compromise, and (5) time required as compared with former critique method.

Application of Findings/Conclusions:

Findings indicated that forming students into discussion groups to resolve the correct response to test items provided positive results in: (1) effect on reinforcement of student learning, (2) influence on student motivation, (3) identification of poorly worded test items, and (4) clearing up students' misconceptions. The following negative or insignificant factors were reported: (1) insignificant course evaluation data obtained; (2) additional time was required in comparison with subject area critique, but time difference was insignificant when compared with item-by-item critique conducted by instructors, and (3) course supervisors and instructors indicated that the student seminar critiquing method afforded more opportunity for test compromise. Only one of the seven activities involved in the study recommended adoption of the new critiquing method. Their prime objections were the additional time required and the additional opportunity afforded students to compromise tests.

SERVICE TEST OF SELECTION BATTERY EXAMINATION

Summary:

The objective of service testing this pre-entry examination was primarily to find a practical and reliable method of selecting students for self-paced training in the ATC standardized Electronic Principles Course (ETV) 3AQR30020. It was found that selections should not be based solely on AQE, AFQT, mathematics test, or electronics test scores. Therefore, students who volunteered for this training were interviewed individually to obtain an adequate profile of their attitude and background. Because this method was time-consuming and impractical, a special selection battery examination was devised which queries students in five areas: (1) attitude and training attitude, (2) mathematics, (3) general science, (4) electronics, and (5) reading ability. Since statistics obtained on 63 students verified the reliability of this examination, data was collected over a six-month period to ascertain the effect of using the scores as a criterion for entry into self-paced training. Findings showed that the self-paced program maintained its high standards using this simpler selection method.

Application of Findings/Conclusions:

An expansion of the self-paced program (from less than three percent to approximately eight percent of the programmed entry) has made it feasible to use the selection battery examination instead of individual interviews. The findings to date justify continuance of this method for the placement of students in self-paced training.

EVALUATION OF TYPE V COURSES CONDUCTED BY DEPARTMENT OF THE ARMY (KEESLER 68-6, 68-59, 68-96 and 68-301C)

Summary:

An evaluation of seven Type V courses conducted by the Army was accomplished to determine the extent to which training conducted is meeting Air Force qualitative training requirements. Training by the U S Army Quartermaster School at Fort Lee, Va. is effectively preparing USAF personnel to meet the requirements and responsibilities of their assignments in Open Mess Management. However, their training in the Army Food Service Advisor course was concluded to be insufficiently relevant to prepare personnel for duty requirements of an Air Force Food Services Officer. Training received by USAF personnel in the Stenographic Specialist Course, conducted by the Adjutant General School at Fort Benjamin Harrison, Indiana, was considered to be satisfactory on most training standard elements. However, non-prior service personnel, entered immediately after completing basic military training, were having difficulty on the job with military terminology and format. In addition, inadequate screening of Air Force Personnel selected for entry caused a high academic elimination rate. Training in four Satellite Communications Courses, conducted by the USA Signal School at Fort Monmouth NJ was providing the basic system peculiar knowledge and required skills; however, the pace of training was too slow for many of the field experienced USAF personnel.

Application of Findings/Conclusions:

Evaluation findings are being used for coordination with the U S Army to develop training programs that will more nearly meet USAF Qualitative Training Requirements. A revised curriculum is being developed for Food Service Officer training and a Programmed Instruction Package on Air Force Food Service accounting procedures has been validated and is scheduled for use in the course in January 1969. Action on a recommendation that future entries for Stenographic Specialist training be made from carefully selected graduates of the Administrative Specialist course is pending. The Army has been requested to make entry quotas available to provide full Air Force classes in Satellite Communications Courses. They were further asked to conduct instruction for USAF students at a pace and level that will provide necessary challenge for the field experienced repairmen being entered.

INSTRUCTIONAL SYSTEM DEVELOPMENT PROJECTS

Summary:

Training for Food Service Subsistence Accounting procedures for use in the Food Services Officer Course conducted by the Army at Fort Lee, Va.has been validated and is scheduled for implementation during January 1969. The entire High Reliability Soldering and Connections Course has been systematized to NASA specifications. Individual student tryouts of the self-pacing material have been completed. The new course is scheduled for implementation in late January 1969. The systematization and operational testing of the Ground Radio Communications Equipment Repairman Course has been completed. This course covers the knowledges necessary to perform organizational and field maintenance of selected electronic equipment. Implementation is scheduled for late January 1969. The Maintenance Management portion of AFM 66-1 has been prepared as a Programmed Instructional Package. The text was completed and has been made available for Air Training Command-wide use in Ground Electronic Maintenance Courses. The Consolidated Base Personnel Office Procedures in support of the Refresher Course on Personnel Data Systems - Officers, has been programmed as an adjunct to Volumes I, II, and III of AFM 30-3. This training material is in use in Keesler CBPO and has been available for use in other like organizations within ATC.

(Not Complete)
INSTRUCTIONAL SYSTEM DEVELOPMENT PROJECTS

Status Summary:

The academic portion of the Weapons Controller (Manual) Course is being programmed using group pacing techniques while the lab portion will be self-paced. Implementation of this course is estimated to be July 1969. A combination of group and self-pacing techniques is being used in preparing the Electronic Intercept Operations/Analysis Specialist Course. In the Computer Programmer area the common areas of the three courses comprising the Command and Control Systems Computer Programmer Career Field have been systematized. The use of group and self-pacing techniques will probably accelerate training. The course is scheduled for implementation during April 1969. In August of 1969, implementation is scheduled for select portions of the Aircraft Electronic Navigation Equipment Repairman Course being prepared as a programmed text. The systematization effort of select portions of the Air Traffic Control Radar Repairman Course involves extensive use of projected visual aids and group pacing. Course implementation is scheduled for May 1969. The programming of Digital Techniques covering the Principles of Digital Processing Circuitry is currently in the development stage. January 1969 is the scheduled implementation date for the Projectionist Training Course which is currently undergoing operational testing. A programmed text is being planned for the In-Service Training Course 104, Guidance and Counselling. Projected primary users of this text are the numerous ATC Field Training Detachments. The Auditorium Audio-Visual Media Devices project falls within our mission support area. It covers the preparation and evaluation of software and multi-media equipment for use in auditorium briefings as well as in various training areas. This system is scheduled to be ready for use by June 1969.

(Not Complete)
"INQUIRY METHOD" FOR ELECTRONICS TRAINING, KEESLER 68-206

Status Summary:

This project was initiated to explore the application of the "inquiry method" to the training of electronic equipment repairmen, and to develop the technique for preparing training material to support the method. A highly successful demonstration at a leading university educational media conference recently highlighted the characteristics and effectiveness of the inquiry method applied to the instructional process for certain scientific training applications. As a result, Keesler has researched available literature on the subject, and a plan for development and service testing this method of instruction in electronic maintenance training environment has been approved by Hq ATC. The development of training objectives, testing materials, training aids and instructional strategies is about completed. Experimental students are being selected, and instruction is scheduled to start in January 1969. A demonstration for the School Staff is planned for March followed by a final report in June 1969.

(Not Complete)

SERVICE TEST OF SIMMs TECHNIQUES IN THE ATC STANDARDIZED ELECTRONIC PRINCIPLES COURSE (ETV)

KEESLER 68-204

Status Summary:

One of the difficulties in electronic principles training is establishing in the minds of the students the functional relationship between various circuits comprising a complete equipment. Students first encounter the problem in receiver principles when they find individual circuits interacting to produce an intelligible audio output from a radio frequency input. Two pilot studies were conducted to investigate the potential of using, at this point in training, techniques adapted from the highly logical format employed in Symbolic Integrated Maintenance Manuals (SIMMs). Favorable results prompted this formal service test of the techniques and training material developed during the latter pilot study. The training material consists of a blocked schematic with corresponding blocked text and a blank maintenance dependency chart which is filled in by students to indicate the interdependency of functions, signal availabilities, and events. By using specially developed training aids (charts, diagrams, and 35mm slides), experimental groups are trained and subsequently tested on this area of instruction. Matched control groups are likewise tested and their scores are used as a basis for comparison. The training materials have been useful and do insure student participation. Since functional relationships of a radio receiver are difficult to teach within the time frame specified for the standardized course, the SIMMs technique may prove particularly helpful to instructors newly assigned to this area of training. The findings to date indicate that this methodology has merit; however, more statistical data must be obtained to make a conclusive evaluation. The schedule of events for this project is undergoing revision reflecting a delay in the initially planned completion date. This action was necessitated by an unexpected large turnover of qualified instructor personnel and limited resources available to apply to the project during the reporting period.

(Not Complete)

COMPUTER ASSISTED INSTRUCTION

Status Summary:

Keesler is conducting a continuing study of activities in the field of Computer Assisted Instruction (CAI). Two reports summarizing initial survey results were published during 1967. In July 1968 Hq ATC assigned the responsibility for developing an initial in-house CAI capability and the development of a CAI training module to Keesler Technical Training Center. This mission, which is further detailed in the ATC CAI Plan-68, 10 August 1968, will support the USAF Phase II Computer Program (Burroughs 3500). A 12-man team has been formed and trained in the techniques of developing CAI software which is compatible with an automated training computer system developed by Systems Development Corporation (SDC), Santa Monica, California. The Keesler CAI team will develop a base level personnel management module which, when validated and released by Headquarters, USAF, will be used for on-the-job training of personnel specialties at every B3500 computer location. Training for the CAI team, covering instructional systems development, computer orientation, Phase II personnel systems (given by Keesler), and computer assisted instruction training (given by SDC) has been completed and a curriculum analysis phase is under way. The present schedule for delivery of the CAI Module is September 1969.

(Not Complete)
INTERVIEW OF NEWLY ASSIGNED INSTRUCTORS WITH FIELD EXPERIENCE
KEESLER 68-304

Status Summary:

The objectives of this program are to obtain field feedback information on the utilization and proficiency of resident school graduates and the relevance and effectiveness of Career Development Courses in supporting the field upgrade training programs. Starting in March 1968 each newly assigned instructor to our Operator Department who has field experience completed an Experience Inventory Survey questionnaire immediately after reporting for duty. The questionnaire is designed to identify individuals who can provide information on course graduate utilization and proficiency and/or CDC relevance and effectiveness in the field upgrade program. The completed questionnaire is reviewed by Department Curricula Training Specialists. Those individuals whose recent job experience indicate that they can contribute reliable training evaluation information are scheduled for personal interview. The data accumulated during a given period of time specified in the appropriate evaluation plan will be summarized and used to supplement data obtained from other sources to evaluate the relevance and adequacy of selected training programs. The program is currently being service tested in one training department. Since the beginning of the service test 64 newly assigned instructors to six different training courses have completed the Experience Inventory Survey questionnaire and 28 of them have been formally interviewed. The general reaction to the program is favorable and indicates that it may be a useful supplemental technique for validating CDC and resident course content. This service test is proceeding as scheduled and will be completed during 4th quarter FY69.

(Not Complete)
TRAINING PERFORMANCE SURVEY UNDER REVISED ENLISTMENT STANDARDS, PHASE II, PROJECT 100,000

Status Summary:

This project was expanded to include Personnel and Administrative Specialties as these courses were moved from Amarillo during the reporting period. Three hundred ninety-eight New Mental Standards (NMS) airmen recruited during Phase II (October 1967-October 1968) were entered into formal training and 600 were assigned DDA. School attrition of NMS airmen for all reasons is running about 10% from P&A Training. Attrition of NMS airmen from the Type V Cook course has been less than 1%. Ten field trips have been accomplished to evaluate proficiency of graduates and adequacy of Career Development Courses to support field training of DDA's. Findings of the evaluation of Phase I DDA's of the Administrative Specialist jobs indicated that it would be highly desirable to train as many as possible through formal training. This finding was implemented during the reporting period. About 90% of NMS airmen destined for Administrative Specialist duties are now being sent through the formal training route. All Phase II NMS airmen have been entered into formal training or assigned DDA. The requirements of the ATC Plan of 2 January 1968 are being accomplished as scheduled.

(Not Complete)

SERVICE TEST OF THE USE OF THE BUIC III COMPUTER IN PROGRAMMER TRAINING
KEESLER 68-211

Status Summary:

This project was implemented to determine the feasibility of using the BUIC III computer, which is a maintenance training vehicle, to support training on compiler language techniques which is common to several computer programmer courses. The test consists of replacing two days of classroom training with student performance on two successive Saturdays. Saturday use of the computer is required since it is used for other training on a 3-shift basis with the fourth shift reserved for maintenance. Learning objectives for the two days of training have been prepared for use in lieu of a PLAN OF INSTRUCTION. Two classes in Course 3OZR0124-2, Command and Control Systems Computer Programmer and two classes in Course 3OZR0124-3, Store and Forward Communications Systems Computer Programmer will participate in the test. Students are required to design and code JOVIAL programs which will solve designated problems. These programs will be punched into card decks prior to the start of training. An equipment log will be maintained. In the event of computer failure, training will continue on schedule by reverting to the normal classroom activities. Training was conducted as scheduled in November 1968; the system functioned adequately and satisfactory student performance was achieved. This project is scheduled for completion in April 1969.

(Not Complete)

ANALYSIS OF ELECTRONIC COMPUTER PRINCIPLES SOLOs FOR APPLICABILITY TO TERMINAL PHASE TRAINING NEEDS

Status Summary:

This project is being conducted to determine the extent to which training in electronic computer principles contributes to instruction in the follow-on blocks of basic electronic data processor and computer courses. A questionnaire, designed to rate the importance of each SOLO in supporting follow-on training, was administered to 144 Computer System Department instructors and supervisors. Criteria were established for identifying those SOLOs which a consensus of instructors and supervisors felt did not contribute significantly to follow-on training needs. These SOLOs fell into groups by subject matter area with very few isolated cases of a SOLO on a specific subject being singled out. Preliminary analysis of these groups revealed that they consisted of SOLOs which instructors and supervisors felt did not contribute significantly to follow-on training or the job in the field, SOLOs on subjects required on the job but not in the terminal phases of training, SOLOs whose effectiveness could be enhanced by changing their location in the sequence of instruction, and SOLOs which need to be rewritten. Each of these groups will be subjected to further analysis and recommended actions to be taken, if required, will be included in a final report on the project.

(Not Complete)

PRETEST - POSTTEST EVALUATION OF INSTRUCTION & MEASUREMENT

Status Summary:

This project is being conducted to improve the quality of written tests and instruction in electronic computer principles. The objectives of the service test are to determine the extent of prior knowledge of entering students, measure learning gains by students between pretests and posttests, and identify subject matter areas where little learning takes place. An alternate of the tests in Blocks II, III and IV of Course 3AQR30520 were administered to 59 nonprior service students in classes 680724 through 680828 immediately prior to the class entry date. Subsequently, 56 of these students took the same alternate test for Blocks II, III, and IV after completing these blocks of instruction. Data on each test item has been tabulated to determine the percentage of students who selected the correct answer in pretest and the percentage who selected the correct answer in posttest. In those instances where little change occurred, construction of the test question, criticality of the subject matter and the quality of instruction will be analyzed to determine why little gain was made in student learning and actions which are required to make training and/or testing more relevant and effective. This project is scheduled for completion in March 1969.

DRUG ABUSE - MILITARY TRAINING PROGRAMS

Summary:

This study, requested by ATC, was made to evaluate possible training for Basic Military Training (BMT) and Officer Training School (OTS) on hallucinative and addictive drugs. The present BMT program covers use/possession of drugs during briefings and in Military Law. Department of Army Pamphlet 360-602, Drugs and You, is issued to each trainee. Instructors have access to Air Force Pamphlet 34-2 to enrich briefings and classroom work. One hour of narcotic instruction has been added to the BMT curriculum. The films "Marijuana" and "Drug Abuse and You" meet the objectives of AFR 35-6, Illegal or Improper Use of Drugs. OTS has adopted a film on LSD. Action to incorporate further revisions will be taken as required.

Application of Findings/Conclusions:

Indications are that with the addition of the films and pamphlets to the curricula, the requirements of the regulation are being met and the training is adequate for the present. Close surveillance will be maintained to determine if additional changes become necessary.

AN EVALUATION OF NEW MENTAL STANDARDS AIRMEN DURING BASIC MILITARY TRAINING (BMT)

Summary:

The purposes of the study were threefold: To analyze and determine causes for Project 100,000 discharges, to compare discharge rates among the various aptitude categories and determine whether trends are developing, and to review compliance with Air Force policy and procedures concerning discharge rates and to determine whether training standards were being maintained. The study which includes data on male non-prior service BMT discharges for three and one-half years (Jul 1965 through Dec 1968) shows a definite pattern in elimination rates. The elimination rate increases as the mental aptitude category decreases. High school graduates have lower elimination rates than do non-high school graduates of the same aptitude. Both high aptitude and completion of high school are significantly related to successful completion of BMT. The data for the first half of FY68 generally show lower discharge rates for each AFQT category over the previous fiscal year. The data for the three and one-half year period show that both administrative and medical discharges are correlated with AFQT category and education. (Comparison of data for calendar years 1967 and 1968 showed that administrative discharges now receive a greater percentage of psychiatric evaluations before being discharged.) Data for the latter period also indicate airmen are given more opportunity to succeed and that administrative discharges are well justified. Comparison of discharge rates by month of separation show that both Category IV and New Mental Standard Airmen have lower elimination rates for 1968 than for the respective months of 1967, despite the fact that the qualitative input was somewhat lower.

Application of Findings/Conclusions:

The study revealed that the 3720 Basic Military Training School is complying with the directives and policies established for Project 100,000 airmen. Each individual is given every opportunity to meet the minimum standards for graduation. He may be given special or remedial training in addition to normal BMT. He must however meet the standards prior to graduation. Adequate justification exists for any airman given either an administrative or physical discharge.

EVALUATION OF COURSES CONDUCTED BY THE 3720TH BASIC MILITARY SCHOOL (BMS)

Summary:

This report summarizes findings obtained by internal and external evaluation of basic military training during the period January through October 1968. Part of this evaluation included Course 3AIR99128, Military Training Instructor, which is assigned to the 3720th Basic Military School. The evaluations were conducted for the purpose of assessing the efficiency and effectiveness of training and for identifying weaknesses that should be corrected. Course operating procedures were evaluated during the internal evaluation. Pretest-posttest data for basic military training indicated that, in general, training was very efficient. It was determined that the revised course control documents were stated in meaningful terms, correlated with the plan of instruction, and are in compliance with current directives. The reports titled "Evaluation of New Mental Standards Airmen During BMT," and "Third Annual Review of Basic Military Training," as well as an analysis of the course control documents, measurement, and visits to the classroom indicate that BMS is providing training relevant to user requirements.

Application of Findings/Conclusions:

Follow-up has been scheduled in the areas of measurability of objectives, determination of student achievement gain, measurement of objectives, and efficiency of training processes. This is to determine if action has been taken to develop written examination items simultaneously with statements of learning objectives to insure that measurement devices do not lag behind curriculum development. Follow-up will also be made in the area of regulatory requirements to determine if applicable instructor rating forms are being maintained in accordance with existing directives in 3726 BMTS and the Military Training Instructor Course.

EVALUATION OF COURSES CONDUCTED BY THE DEPARTMENT OF SECURITY POLICE TRAINING

Summary:

This report summarizes the findings obtained by the internal and external evaluations of Security Police Courses during the period 1 January through 15 December 1968. The evaluations were conducted to identify training weaknesses in the courses, to determine

that satisfactory training capability is being maintained, and to determine the ability of the graduates of the Security Police Courses to perform their duties. Course operating procedures were evaluated during the internal evaluation. The external evaluations produced information from supervisors of graduates of Course 3ALR81130A, Sentry Dog Handler; from supervisors of graduates and graduates of Course 3ABR81130, Security Policeman, and from graduates of Course 3AZR81170A, Sentry Dog Handler Supervisor. In addition, Course 4AST81150-2, Security Installations and Work Parties, was evaluated by members of a Field Training Detachment stationed at Eglin AFB, Florida. Analysis of the data obtained from all sources indicated that the graduates are capable of performint their duties in the Security Police career field and that a satisfactory training capability exists. As a result of the Security Police Training Conference held at Lackland AFB, Texas, 9 - 11 December 1968, several recommendations were made concerning changes to subject courses.

Application of Findings/Conclusions:

The changes agreed upon in the referenced conference will be implemented in accordance with the schedule shown in the conference report.

(Not Complete)
TRAINING PERFORMANCE SURVEY UNDER REVISED ENLISTMENT STANDARDS (PROJECT 100,000)

Status Summary:

The overall objective of this project is to gather data and gain experience in the training of airmen recruited under revised enlistment standards for use in future training planning for the Security Policeman Course (3ABR81130). The specific objectives are to survey the performance of these airmen in the Security Policeman Course and determine the adequacy of the training program to accommodate the test students. Also, to survey the progress of these airmen who are given Directed Duty Assignments (DDA) in AFSC 811X0 for apprentice training on the job with special emphasis on evaluation of the adequacy of Career Development Course 81150, Security Policeman (CDC 81150) for this test population. A considerable amount of information has been gathered to date on the school graduates as well as those assigned Directed Duty. Some of this information was used in completing Project Reports 68-22 and 68-31, which are included in Part One of this Training Analysis Digest.

EVALUATION OF A SYSTEM FOR OBTAINING STUDENT COMMENTS ON TRAINING
(LOWRY SE 68-2)

Summary:

Previous studies had shown that student critiques were often received too long after the fact and were too generalized to enable training managers to investigate them. Also, the present critique system produces voluminous data and a tremendous workload of processing and analysis. Finally, it was felt by many training managers that the present ATC Form 736 was too directive in nature by suggesting to the student those aspects of training to critique.

In this study suggestion-type boxes were placed in break/bulletin board areas, and students were briefed on the program. The briefing was neutral: it neither encouraged nor discouraged participation. A special form was designed which did not suggest what should be critiqued, but was structured to extract specific (who, what, when) information on each comment. The boxes were checked and emptied daily and each comment was analyzed. Two training departments were used as test sites. The system was used for 90 days in each.

In one department the average number of students involved was 150. Eighteen comments were received. In the second department the student load was 900. This department received 23 comments. All training managers commented favorably upon the ease and precision with which these comments could be checked and verified.

The comments were not often valid. Those which were true contained no information not already known to management. Where corrective action was indicated, it had already been initiated prior to receipt of the comment.

The main conclusion was that this test system was neither more nor less informative than the current system; however, it is far easier to operate, administer, and process.

Application of Findings/Conclusions:

Copies of this special evaluation were forwarded to HQ ATC (ATTSE-E) along with a detailed proposal for revision of the student critique program. (Editor's Note: Hq ATC asked the other centers to comment on this study. On receipt of these comments, Hq ATC concluded that the critique system presently prescribed by ATC 52-29 is more effective than the one proposed in this study.)

SPECIAL EVALUATION OF A VIDEOFILM INTRODUCTION TO THE STUDENT CRITIQUE SYSTEM
(LOWRY SE 68-14)

Summary:

As requested by HQ ATC (ATTSE-E) Lowry's Training Evaluation Division acted as technical advisor working with the Television Operations Branch to produce a videofilm regarding the student critique program.

The goals of the film were twofold: (1) To motivate the student to the critique program and gain his enthusiastic participation in it, and (2) to demonstrate, by specific example, how to complete the ATC Form 736 in a manner that would produce meaningful results. The finished film (TVL 00-45, "Student Critique of Technical Training") was ready for service testing in early August 1968.

The film was shown to randomly-selected classes from two training departments. Sampling was structured to provide a representative cross-section of student grade/rank distribution at Lowry. The sample consisted of 207 students; 107 airmen, 66 non-commissioned officers, 26 officers, and 8 civilians. After each showing, questionnaires were distributed. The questionnaires consisted of 8 items of general student reaction to the film and four multiple-choice items measuring student comprehension of specific points.

When all data had been accumulated, analysis was begun on an item-by-item basis. It revealed that:

1. Students reacted to the film either neutrally or only slightly favorably.

2. The film achieved a certain level of teaching effectiveness in some areas, but also introduced some areas of student confusion.

As a result of analysis, the film was not recommended for either base-wide or command-wide use. A detailed study report was forwarded to HQ ATC (ATTSE-E) by letter.

Applications of Findings/Conclusions:

HQ ATC (ATTSE-E) has directed that a new version of this film be prepared and service tested. This new film will be reported as a separate special evaluation.

THE USE OF TACHISTOSCOPES IN PROJECT 100,000 TRAINING
(LOWRY SE 68-15)

Summary:

Recognizing problems with Project 100,000 airmen in the areas of basic reading and comprehension skills, the 3415th Technical School project officer and the training managers involved decided to obtain tachistoscopes and programs to meet these needs. Funding was provided by Headquarters ATC, and procurement action began in April 1968. Happily, it was found that direct purchase of tachistoscopes was not necessary; one was acquired as surplus from Amarillo AFB, and the remaining four were obtained as surplus from the Air Force Academy. The tachistoscopes were assigned to the departments involved (Supply and Procurement, Aerospace Photography, and Principles) and selected personnel were briefed regarding the study. However, just as the necessary programs were received, HQ ATC directed by letter that no reading/comprehension training be conducted at Lowry. Lackland AFB had been assigned prime responsibility for such programs. At this point, the special evaluation was terminated.

Application of Findings/Conclusions:

This evaluation did not progress far enough to yield findings; however, during its development and discussion, many people became familiar with the capability and applications of tachistoscopic display equipment. Several proposals for use of the equipment (not to involve reading/comprehension training for pipeline students) have been put forward and are under consideration by the 3415th Technical School.

It appears, based upon tentative planning and discussions, that all five tachistoscopes and some of the programs obtained for this special evaluation will be validly and productively employed to meet generalized training needs of the center as a whole.

(Not Complete)
EXPERIMENTAL OFFICER CRITIQUE SYSTEM
(LOWRY SE 68-4)

Status Summary:

In the conduct of other special evaluations of the student critique of training, it was noted that the ATC Form 736 might be too rigidly structured and too confining to fully extract pertinent data from officer students. Generally, officers seem more verbally oriented than other students and more capable of expressing their views in narrative form; customarily, the "comments" areas of the Form 736 will be thoroughly utilized by officers. It was decided to experiment with narrative critiques in the 3OZR1400 course. This experiment began in January 1968 and, due to relatively infrequent class entry, will be fairly long term before a sufficient sampling is obtained. During this experiment officers graduating from this course will be requested to make narrative critiques which will then be analyzed and summarized in terms of the ATC Form 736 format. Upon completion of the experiment, the concept will be evaluated for continuance or abandonment and appropriate recommendations made.

(Not Complete)
COMPARISON OF QUALITY CONTROL AND FIELD EVALUATION DATA
(LOWRY SE 68-6)

Status Summary:

As a result of a civilian suggestion submitted through the base suggestion program, this study was established in February 1968. Its purpose is to gather evaluation data on graduates from two sources: (1) The graduates themselves and their supervisors by means of field visits, and (2) by research of the Quality Control records and interviews with Quality Control personnel at the same bases. The suggestion is that data from quality control sources will be equally significant or more significant than the customary data. No special field evaluation visits are scheduled in support of this study; it is being handled as an adjunct to normally-scheduled trips. It is estimated for completion in August 1969.

(Not Complete)
EXPERIMENTAL CLASSMATE TUTORIAL SYSTEM
(LOWRY SE 68-8)

Status Summary:

A feasibility study conducted previously illustrated the value of a tutorial system where advanced students work with weaker, newer students during remedial training periods. This concept, however, was not fully exploitable in short and/or infrequent entry courses. In these cases, there was seldom a pool of advanced students available for tutorial work. This particular study is testing the feasibility of having students of superior achievement but who are not further advanced in the course act as tutors for classmates who are experiencing academic difficulties. Two courses are currently involved: 3ABR64530-1 and 3ABR64730-1. Upon completion of this experiment and analysis of its results, appropriate recommendations will be made. Completion of this study is estimated for March 1969.

(Not Complete)

SURVEY OF PRIOR-SERVICE AIRMEN

(LOWRY SE 68-13)

Status Summary:

In March 1968 the Commander, 3415 Technical School, USAF, directed that a survey be made of entry, graduation, and elimination rates for prior-service airmen in resident training within the school. Additionally, frequency and nature of disciplinary actions taken against these men are being monitored and tabulated.

Historically retrievable data was researched and compiled back to 1 November 1967, and current data is being consolidated on a monthly and cumulative basis. So far, no alarming trends or significant factors (as compared with non-prior service students) have been noted. This survey is forecast for termination and final reporting in March 1969.

(Not Complete)

BIBLIOGRAPHY OF ETV RESEARCH FINDINGS

(LOWRY SE 68-16)

Status Summary:

During the past 10-15 years, many researchers have devoted their efforts to the investigation of educational television (ETV) as a medium of instruction. Reports of such research and its findings are widely-scattered and not readily obtainable from any central source nor available in a consolidated listing. It is possible that researchers and television personnel are duplicating efforts or failing to benefit from research already completed because it is unknown to them.

The Special Evaluation Branch of the Training Evaluation Division is now compiling a listing of all known research in this field. This is to be assembled in the form of a brief statement of each research study's finding and conclusions followed by the title, author, source, date, etc. of the study cited. This bibliography will provide rapid, concise information and enable interested personnel to obtain more details, if desired.

Currently, this bibliography is in the investigation and assembly stages; no firm distribution schedule has been established, but it is to be printed in sufficient copies that all interested personnel within the command can receive one.

(Not Complete)
COMPARISON OF JOB SPECIALTY SURVEY WITH COURSE CONTENT
(LOWRY SE 68-17)

Status Summary:

Field evaluation results in some career fields have suggested that there are variations between the skills being taught in resident training courses and those skills being utilized in the field. So far, these variations appear to be matters of emphasis and relative importance rather than concrete omissions or additions. That is, a skill which ranks third in the order of field utilization might rank tenth in order of resident school emphasis or vice-versa.

This special evaluation will involve comparison of the Job Specialty Survey for the 462X0 career field with curricula and other course control documents in the 3ABR46230-2, -3, and -4 courses. Current copies of the specialty survey have been requested and are expected in January 1969. Upon receipt and review of the survey, specific procedures and an evaluation timetable will be developed.

(Not Complete)
EVALUATION OF REVISED VIDEOFILM ON STUDENT CRITIQUE SYSTEM
(LOWRY SE 68-19)

Status Summary:

As a result of a special evaluation of a videofilm (reported on a previous page) Hq ATC (ATTSE-E) directed that the film be reaccomplished, and that the new version be re-evaluated. Evaluation data derived from the original version will be used in designing and planning the new videofilm. Preliminary conferences with television specialists have been held, and script writing was begun in December 1968. The new film will be produced and evaluated in early 1969.

3750TH TECHNICAL SCHOOL
SHEPPARD TECHNICAL TRAINING CENTER
SHEPPARD AIR FORCE BASE, TEXAS

EVALUATION OF CAREER DEVELOPMENT COURSE NUMBER 36153 (SHEPPARD 68-65)

Summary:

A field evaluation of Career Development Course (CDC) 36153, Missile Systems Cable Splicing Specialist/Supervisor, was conducted to determine how well the self-study course was meeting the needs of field organizations in support of their on-the-job Training (OJT) programs. The evaluation was conducted by three methods: (1) An analysis of data obtained from mailed questionnaires completed by base training officers, OJT monitors, and supervisors of technical school graduates located at Air Force bases where the CDC was being used in the airman upgrade programs; (2) field visits to Air Force bases where the evaluator interviewed CDC enrollees, their supervisors and key training personnel who were acquainted with the contents of CDC 36153 and its effectiveness in supporting the OJT programs; (3) the review and consideration of comments made by technical writers, resident course instructors and subject matter specialists during conferences wherein all aspects of the relationship between the CDC, the resident course, and field requirements for training in AFSC's 36133, 36153, and 36173 were discussed. Findings obtained from the accomplishment of the evaluation project supported the following conclusions:

The current edition of CDC 36153, Missile Systems Cable Splicing Specialist/Supervisor (01 1266 and 01 0667) lacks adequate coverage in some areas and should be revised and updated as soon as possible.

Areas of CDC 36153 that are in need of additional or new coverage include fundamentals of electricity; AMF, ATI and channel splice cases; and maintenance inspection system and forms.

Application of Findings/Conclusions:

CDC 36153 is being revised by the Department of Communications Training. The revised CDC will be expanded to include new or increased coverage on electrical fundamentals, splice cases and maintenance records. Estimated activation date for the revised CDC is September 1969.

EVALUATION OF MAINTENANCE AND CONTROL SPECIALIST COURSE 3ALR55530-3 (SHEPPARD 68-69)

Summary:

This evaluation was performed to determine the ability of 3ALR55530-3 graduates to perform their duties in the field. The evaluation was based on mailed questionnaires, internal evaluation projects, and student critiques. Nineteen graduates from six major commands including PACAF were queried. Twenty per cent of the graduates rated the course Outstanding, and eighty per cent rated it Satisfactory. They called attention to two weak areas of training, "Locating equipment part numbers and usable codes," and "Prepare data automation inputs." Several graduates suggested lengthening the course because of the rapidity with which a large volume of information had to be presented. The training provided by the course was closely aligned with duties performed by graduates in their initial job assignments.

Application of Findings/Conclusions:

Action has been taken to include performance projects to emphasize and clarify procedures for locating part numbers and usable codes. Presently, manual completion of scheduling forms is all that is required; however, an extra effort is being made to improve training pertinent to preparation of data automation inputs. Although lengthening the course is not considered practical, every effort is being made to simplify and clarify the instruction.

EVALUATION OF COMMUNICATIONS CENTER SPECIALIST COURSE 3ABR29130 (SHEPPARD 68-71)

Summary:

The purpose of this evaluation project was to determine how well the training being given in Course 3ABR29130 was meeting the needs of graduate using organizations throughout the Air Force. The evaluation of training was accomplished by three methods: (1) An internal evaluation wherein selected factors that govern the quality and effectiveness of training were reviewed by a course evaluator, (2) an analysis and review of data obtained from mailed questionnaires completed by graduates' supervisors in field organizations, and (3) interviews with newly assigned instructors who have had recent field experience with graduates of Course 3ABR29130. Findings obtained through the conduct of the evaluation project indicate:

Training in Course 3ABR29130 is being conducted in a satisfactory manner by well qualified instructors.

Training support elements having a direct bearing on the quality of training were found to be adequate for producing qualified graduates.

Out of 29 Specialty Training Standard (STS) tasks selected for survey in the field, training was rated satisfactory or better on 27 tasks and slightly weak on only two tasks.

Instruction in Course 3ABR29130 is being kept abreast of changes in the field through feedback information gained from interviews with newly assigned instructors who have had recent field experience in AFSC 291X0.

Application of Findings/Conclusions:

The Department of Communications Training is reviewing the amount and quality of training being given on STS elements 8a, "Select cryptographic method for transmission of messages," and 9d, "Identify visual and aural signals of control units to ascertain transmission equipment and circuit conditions," to insure that future graduates of Course 3ABR29130, Communications Center Specialist, can perform these tasks to the levels of proficiency specified in the current STS for AFSC 29130.

EVALUATION OF SOUTHEAST ASIA MAINTENANCE REPLACEMENT TRAINING FOR TACTICAL FIGHTER AND RECONNAISSANCE AIRCRAFT (SHEPPARD 68-79)

Summary:

The prime objective of the evaluation was to determine the effectiveness of the Type 4 Maintenance Training Program conducted for Southeast Asia (SEA) replacement personnel. Eleven selected Sheppard Technical Training Center Field Training Detachments (FTD's) located at various operational Tactical Air Command bases within the continental United States conducted special training courses. Aircraft maintenance training courses were presented to personnel in AFSC's 30XXX, 31XXX, 40XXX, 42XXX, 43XXX, and 46XXX. Student personnel were selected for overseas assignment and were provided special training enroute to their overseas organizations. The detachments conducting the training were selected where training equipment and operational hardware were available for practical training. The evaluation was conducted in accordance with the schedule and methods in Sheppard Technical Training Center Evaluation Plan Number 267. Student critiques and graduate questionnaires were completed by personnel attending the training. Personal interviews were conducted with SEA students in training during all FTD scheduled evaluations and staff surveillance visits by management personnel from the Center.

Findings revealed that during a four-month period (June, July, August, and September 1968), 1578 students graduated from Type 4 special training courses. Forty-five per cent of the graduates rated training received as Outstanding; 55 per cent of the graduates rated training as Satisfactory. Five students of the 1578 total rated the training as Unsatisfactory which is considered negligible; however, the causes were investigated. All five unsatisfactory critiques resulted from inoperative training equipment due to nonavailability of parts in the host base supply for new F4E aircraft. Distribution of graduates by weapon system was: 378, F4; 153, RF4; 348, F100; 31, RF101; 523, F105; and 145, EB66.

Application of Findings/Conclusions:

From interviews with SEA students in training, an analysis of graduate critiques and questionnaires; it was readily apparent that the acceptance and success of the training program depended on the amount of practical training received by the student. The planning of SEA replacement training under ATC Operations Plan 16-67 for tactical and reconnaissance aircraft maintenance personnel was valuable to the FTD's in scheduling student flow and workload since the FTD was conducting SEA training in addition to the host base training program. More emphasis has been placed on the importance of students receiving practical training in the host base maintenance complex. Tactical airlift and utility type maintenance replacement trainees are now included in the ATC Operations Plan to provide advance notification to these FTD's for scheduling and workload control.

EVALUATION OF CORROSION CONTROL SPECIALIST COURSE 3ABR53530 (SHEPPARD 68-102)

Summary:

This evaluation was conducted to determine the ability of 3ABR53530 graduates to perform corrosion control duties. The evaluation was based on mailed questionnaires, internal evaluation projects and student critiques. Forty-three graduates were evaluated by their supervisors. Thirty per cent of these graduates were rated Outstanding, and 70 per cent were rated Satisfactory. The evaluation indicated the graduates were well trained in corrosion control techniques. When these graduates attended the corrosion control course, instruction was given on non-destructive testing. When the Non-destructive Specialist ladder was added to the career field, this instruction became less important. The evaluation proved this by showing several non-destructive testing tasks being performed by less than 30 per cent of the graduates. Another significant result was the low utilization shown on a number of new items of equipment. This is believed due to the time lag in authorizing and procuring new equipment.

Application of Findings/Conclusions:

A tentative Specialty Training Standard coordinated with the major commands deleted many non-destructive testing tasks and required only knowledge type training on those retained. This will improve utilization of graduates and add to the coherence of the course. Little can be done to expedite delivery of equipment to the field; the delay seems to be in the manufacture and delivery to the field.

SURVEY OF AIR FORCE CIVIL ENGINEERING TRAINING

Summary:

This Center analyzed the training problems introduced by the increase in Air Force training loads in FY 70 for Navy courses training Air Force students at Port Hueneme, California. Port Hueneme conducts training to support AFSs 54730 Heating Specialists, 54750A Central Heating Plant Specialists, 54770A Heating Plant Management and Supervision, 55131 Construction Equipment Operator, 55230 Carpentry Specialist and 55233 Masonry. The maximum housing available for Air Force students from Navy resources is 244 spaces located at Point Mugu. The student increase proposed for FY 70 would result in a periodic peak Air Force student load of 397 military and 9 civilian students. If the proposed training requirements are to be met, some of the training courses now conducted at Port Hueneme must be relocated. Sheppard also visited the Army Construction Machine Operator course number 730-62E20, and Army Carpentry course number 712-51B20 conducted at Fort Leonard Wood, Missouri, to determine the feasibility of the Army conducting a portion of the FY 70 training requirements.

Application of Findings/Conclusions:

It was concluded that the Army courses would not meet the qualitative standards required by the Air Force. The Air Force plans to continue training AFSCs 54730, 54750A, 54770A and 55131 in the courses presently conducted at Port Hueneme, California. Sheppard will establish resident training courses to accommodate the FY 70 and subsequent annual training requirement supporting AFSs 55230, Carpentry Specialist and 55233, Masonry.

NORTON AFB COMMUNICATIONS-ELECTRONICS INSPECTION TEAM

Summary:

The Norton Communications-Electronics Inspection Team visited Sheppard during the period 22-24 July 68 to inspect communications training. Types of training inspected and areas of interest involved:

- Communications security training in all basic courses.
- Types 1 through 5 training and procedures of establishing training.
- Currency and duplication of training.
- AF wide equipment procurement vs training equipment use.
- Technical School (TSOP-S) management of communications training.

Applications of Findings/Conclusions:

The Norton Inspection Team conducted an exit briefing and indicated that all areas are excellent.

REVISION OF ATCM 52-10, INSTRUCTIONAL SYSTEM DEVELOPMENT

Summary:

The purpose of the revision was to provide guidance for the design of instructional systems for new weapon systems, for administrative or support type functional systems for new weapon systems, for administrative or support type functional courses, and for the redesign of existing courses. It describes the model for developing effective and efficient courses of instruction through the application of scientific and systematic instructional technology. The draft manuscript was completed and submitted to Hq ATC Sep 1968.

Application of Findings/Conclusions:

It was determined that the concepts and procedures contained in the ATCM 52-10 manuscript should be broadened to permit AF-wide application. Therefore, the responsibility for the development of AFM 50-2, Instructional System Development, was assigned to Sheppard Technical Training Center in Nov 1968. The manuscript is scheduled to be furnished to Headquarters ATC on 22 May 1969.

(Not Complete)
PROJECT ONE HUNDRED THOUSAND

Status Summary:

The Training Performance Survey Under Revised Enlistment, "Project 100,000," is a program established to accommodate additional numbers of low ability (Category IV) first term airmen in selected resident courses. Final Technical School actions on the 483 New Mental Standards (NMS) airmen who entered Phase I (1 Oct 66 - 1 Oct 67) of the project were reported to ATC 31 May 1968.

During Phase II (1 Oct 67 - 1 Oct 68) a total of 1300 NMS test students were entered in 19 courses controlled by the 3750th Technical School. As of 31 December 68, 1067 (82.1%) test students have graduated, 152 (11.7%) are still in training, and 81 (6.2%) have been eliminated.

Phase III, of this project will cover a nine-month period from 1 Oct 68 - 30 Jun 69. This change places Project 100,000 on a fiscal year basis. As of 31 December 68, 122 Phase III students have entered into 10 courses, no students have been graduated or eliminated. ATC has estimated 5765 NMS airmen to be trained in 61 courses during Phase III. They have also estimated that the 3750th Technical School will have a quota of 1167 NMS airmen to be trained in 23 courses. Data will continue to be collected and analyzed through the completion of training for test students in Phases II and III. Final report publication date is unknown.

(Not Complete)
TECHNICAL TRAINING OF ENLISTED COLLEGE GRADUATES

Status Summary:

Headquarters USAF directed the implementation of the College Graduate Enlisted program effective 1 October 1968. It was directed that training courses be modified to provide more training flexibility and more emphasis on "accelerated training" and "wash forward" techniques. This prompted the 3750th Technical School to review each airman basic course for feasibility of accelerated training of enlisted college graduates assigned to airmen basic courses. Methods and procedures were examined to assure that accelerated training is in accordance with the objective of qualifying each trainee in the minimum length of time at minimum cost as well as meeting the criteria established for the course. It has been determined that proficiency advancement is the most suitable technique to accommodate accelerated training. One hundred and forty-six college graduates have been enrolled in 19 airman basic courses. Twenty-five students have graduated. Data will continue to be collected and analyzed during the program. The first formal report was submitted to Headquarters ATC as of 31 December 1968.

(Not Complete)
MANNED ORBITING LABORATORY (MOL)

Status Summary:

A training review meeting was held at the Manned Orbiting Laboratory Systems Office (SO), Los Angeles Air Force Station, California, 13-14 November 1968. Purpose of the meeting was to discuss training requirements and implementation for Manned Orbiting Laboratory ground control operations personnel only. Powered Flight Controller training may begin in August 1969 and continue through May or June 1970 at which time the Powered Flight Controllers would then go to the Satellite Control Facility at Sunnyvale, California. This phase of training will end in September 1970. Air Training Command personnel will have access to contractor data in April 1969 for preparation of course training materials and lesson plans.

(Not Complete)
ANALYSIS OF SPECIALTY SURVEY DATA TO IMPROVE TRAINING

Status Summary:

This Center is concerned with formulating operating procedures to facilitate analysis of survey data and apply findings to improving training. Many actions are within Center jurisdiction and are automatic when there is no change in course length or resource requirements. Using the 361X0 survey data as a test case, this Center has prepared a series of check lists to facilitate comparisons of survey data with course control documents. The specialized knowledge and the combined efforts of course instructors/technicians and training specialists will be utilized to complete the check lists.

(Not Complete)
IN-SERVICE TRAINING COURSE, ATCIT 52-75130, INSTRUCTIONAL SYSTEM DEVELOPMENT

Status Summary:

Purpose is to provide standardized in-service training of Instructional Systems Development at ATC Technical Training Centers. A Course Chart and Columns A and B of the Plan of Instruction (ATC Form 337 and 337A) containing objectives and hours of duration are being coordinated with other Centers. Projected completion date for this project is 28 July 1969.

(Not Complete)
REMEDIAL MATHEMATICS TRAINING TEST PROGRAM

Status Summary:

On 19 Feburary 1968, a remedial Mathematics Training Test Program was initiated at Sheppard TTC, Texas. The purpose of the test program is to determine the applicability of Job Corps Remedial Mathematics Training Course Materials to airmen students who fail technical training due to a deficiency in mathematics background. The test program will include collecting data on a test group of 25 students and data on a control group of 25 students. An interim report containing preliminary statistical data was submitted 22 November 1968. No conclusions or recommendations can be provided prior to final accumulation and analysis of data on all test and control students. It is estimated a final report will be submitted late in March 1969.

(Not Complete)
PLUMBING SPECIALIST COURSE 3ABR55235

Status Summary:

Prior to project development, the Instructional Systems Development Team developed and conducted instructional systems training for 21 Department of Civil Engineering personnel. The systems development for the Plumbing Specialist Course started in August 1968. After completion of the job analysis, work began on the training task analysis and Specialty Training Standard in December 1968. Projected completion date for this effort is January 1970.

(Not Complete)

APPLICATION OF INSTRUCTIONAL SYSTEM PROCEDURES BLOCK III OF MISSILE FUNDAMENTALS COURSE 3AQR44020

Status Summary:

This project was initiated to improve the quality of training in Fundamentals of AC and DC and to provide data for use in determining techniques for applying the systems approach to areas of instruction common to several courses. A training task inventory is currently under development. The projected completion date for this project is January 1970.

PART IV

COURSE CHANGES

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR25271, Weather Observer Technician	In Block VI, 5 hours of Electronic Data Processing was replaced by 2 hours of Communications Security, an additional 2 hours to Communications Networks, and an additional (1) hour to Message Preparation and Dissemination. Two hours of Aero Code was replaced by 1 hour of METAR/ SPECI Code and 1 hour added to Ship Synoptic Code. Radar Storm Detection Set, AN/CPS-9, in Block IX was reduced 4 hours to permit addition of 4 hours of Meteorological Radar Set, AN/ FPS-77. Change effective with class 681009. No change in course length.	To eliminate duplication of shredout speciality training in Electronic Data Processing. To comply with ATC (ATTSE) Ltr, Air Force Communications Security, 24 Jan 68. Update training to include new radar equipment.
3AAR30270, Weather Equipment Technician (PDS Code AXC)	Management and Supervision was increased from 96 to 120 hours: Radar and Computer Circuits 162 hours broken into two blocks; Radar Circuits 84 hours and Computer Circuits and Computing Set, Runway Visual Range, AN/FMN-1 102 hours: DC and AC Circuit Analysis increased from 198 to 210 hours. Course length increased by 2 weeks, changing course length from 34 weeks to 36 weeks.	Internal evaluation to improve subject matter coverage and to provide training required to understand the circuits included in the AN/ FMN-1 Computing Set and the AN/FPS-77 Radar Set. This was included in a Training Plan approved 2 Feb 68 and was effective with class 680717.
3AAR32570, Automatic Flight Control Systems Technician	No major changes have been made since the last report. Minor changes in course training literature were made to align with the latest changes in systems circuitry and operation. Course length has not changed. Change effective with class 680821.	Student critiques and course and field evaluations prove this course to be very satisfactory; therefore, no major changes were required.
3AAR32570A, Automatic Flight Control Systems Technician (Fighters & B-58)	No major changes have been made since the last report. Minor changes in course training literature were made to align with the latest changes in	Student critiques and course and field evaluations prove this course to be very satisfactory; there-

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR32570A (contd)	systems circuitry and operation. Course length has not changed. Change effective with class 681002.	fore, no major changes were required.
3AAR32571, Avionics Instrument Systems Technician	No change. This is a new course designed to meet the requirement established by Change O, AFM 39-1, effective 1 July 1968. This course is 13 weeks in length and will be implemented after training quotas have been established with using commands by Air Training Command Headquarters. The first class is tentatively scheduled for July 1969.	Change O of AFM 39-1 placed the responsibility for installing, repairing, operating, troubleshooting, overhauling and modifying electrical/mechanical aircraft instruments, instrument systems, components and associated equipment in a newly created career ladder, AFSC 325X1, Avionics Instrument Systems Specialist and Avionics Instrument Systems Technician.
3AAR42270, Instrument Repair Technician	Course 3AAR42270, Instrument Repair Technician, will be revised with the class entering training on 5 March 1969 to conform with Change O of AFM 39-1. This change deleted the responsibility for maintenance of Electronic/Transistorized aircraft instruments from the 422X0 career field. As a result, the new course will be only 8 weeks and 3 days long, which is 3 weeks shorter than the previous course. Delay in implementing this course is due to the nonavailability of students for entry prior to 5 March 1969.	Change O of AFM 39-1, effective 1 July 1968, deleted from the 422X0 career ladder the responsibility for maintenance of Electronic/Transistorized aircraft instruments and placed this responsibility in a newly created career ladder identified as AFSC 325X1, Avionic Instrument Systems.
3AAR42370, Aircraft Electrical Repair Technician	While there have been no changes in the course control documents, there has been a trend to place less emphasis on the troubleshooting of operational systems and more emphasis on wiring diagram analysis and system theory of opera-	Continuous critique of the course by both the students and instructor personnel.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR42370 (contd)	tion. Course length has not changed. Change effective with class 680731.	
3ABR30231, Airborne Meteorological/ Atmospheric Research Equipment (MET/ ARE) Repairman	Increased instruction in logic and circuit analysis on the Reader Converter Set AN/ AMM-27 in Block X from 6 to 12 hours. Deleted 6 hours of performance on Reader-Converter Set, AN/AMM-27 from Block XI. No change in course length. Change effective with class 680306.	Reader - Converter Set, AN/AMM-27 is not available for instructional purposes.
3ABR31630G, Missile Systems Analyst Specialist, WS-133A	One hour was taken from each of four units of instruction in Block I to increase the time devoted to "Missile Maintenance Management" from 5 hours to 9 hours. In Block VIII, two units of instruction were increased by three hours each, and the unit on "Logic Principles" was decreased from 18 hours to 12 hours. The changes will be implemented with class 681002, which enters SETS on 29 January 1969. The course length is unchanged.	To improve allotment of instructional time with subject matter and to align instruction with new specialty training standard.
3ABR31630G-1, Missile Systems Analyst Specialist, WS-133A/M	The time devoted to "Airborne Computer Functions" in Block XII was decreased from 15 hours to 9 hours which reduced the block length from 60 hours to 54 hours. In Block XIV, "Guidance and Control System Activation and Reactivation" was increased from 9 hours to 15 hours which increased the block length from 30 hours to 36 hours. The course length was unchanged. Changes were implemented with class 680626, which entered SETS on 22 October 1968.	To improve allotment of instructional time with subject matter and to align instruction with new specialty training standard.
3ABR31630H, Missile Systems Analyst Specialist, WS-133B	Block VII was increased in length from 90 hours to 108 hours. The additional 18 hours were distributed over six units of instruction. Block VIII was decreased in length from 90 hours to 72 hours, and each unit of instruction in the block was reduced a	To provide more complete coverage of subject matter, to eliminate " nice to know" information, and to align instruction, with new specialty training standard.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR31630H (contd)	proportional amount. This change was implemented with class 680501 which entered SETS on 4 September 1968. The course length was unchanged.	
3ABR31630Q, Missile Systems Analyst Specialist (AGM-28B)	The details of the course reorganization were reported in July 1968. No major changes have been made since the last report. A revised POI was approved and implemented in August 1968. No change in course length.	The revised POI implemented the course reorganization reported in July 1968.
3ABR31631Q, Missile Guidance and Control Specialist (AGM-28)	The details of the course reorganization were reported in July 1968. No major changes have been made since the last report. A revised POI was approved and implemented in October 1968. No change in course length.	The revised POI implemented the course reorganization reported in July 1968.
3ABR31632H, Missile Electronic Equipment Specialist, WS-133B	"Operation and Maintenance of Radio Test Set" (12 hours) was added, and training on "Explosive Set Circuitry Test Set" (2 hours) was deleted from Block VIII. Six additional hours were deleted throughout Block VIII, and four hours were deleted from Block XII. No change in course length. Course changes were effective with class 681106 which enters SETS 5 March 1969.	SAC requirement for training on Radio Test Set and deletion of training on Explosive Set Circuitry Test Set. To improve time allotment with subject matter and to align instruction with new specialty training standard.
3ABR31632Q, Missile Electronic Equipment Specialist (AGM-28B)	A revised POI was approved and implemented in December 1968. The revised POI reflects the following changes: Change A to STS for Communication Security; changes in AFM 66-1; changes in AFM 39-1; and minor changes in equipment. No change in course length.	ATC's directive for increased training on Communication Security, changes to AFM 39-1 and changes to AFM 66-1.
3ABR32530, Automatic Flight Control Systems Specialist	No major changes have been made since the last report. Minor changes in course training literature were made to align with the latest changes in systems circuitry and operation. Course length has not changed.	Course and field evaluations and student critiques proved this course to be very satisfactory; therefore, no major changes were required.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR32530 (contd)	**FAST-TRACK COURSE** This course, implemented 4 December 1968, is attended by only highly qualified students including college graduates. The student receives the same training, performance, and written testing as given in the above course to insure that he meets all requirements of the STS. This course is 31 academic weeks in duration and allows a saving of 2 weeks in training time, plus any saving attained by the individual's own proficiency advancement.	This "Fast-Track" course was implemented as a result of ATTSE Ltr, 8 Aug 68, Training and Assignment of Highly Qaulified Enlistees.
3ABR32530A, Automatic Flight Control Systems Specialist (Fighters and B-58)	No major changes have been made since the last report. Minor changes in course training literature were made to align with the latest changes in systems circuitry and operation. Course length has not changed.	Course and field evaluations and student critiques proved this course to be very satisfactory; therefore, no major changes were required.
	FAST-TRACK COURSE This course, implemented 4 December 1968, is attended by only highly qualified students including college graduates. The student receives the same training, performance, and written testing as given in the above course to insure that he meets all requirements of the STS. This course is 14 academic weeks in duration and allows a saving of 2 weeks training time plus any saving attained by the individual's own proficiency advancement.	This "Fast-Track" course was implemented as a result of ATTSE Ltr, 8 Aug 68, Training and Assignment of Highly Qualified Enlistees.
3ABR32531, Avionics Instrument Systems Specialist	No change. Course 3ABR32531, Avionics Instrument Systems Specialist, is a new course implemented on 16 October 1968 to conform with the requirements of Change O of AFM 39-1, effective 1 July 1968. This course is 28 weeks in duration and was established to train personnel respon-	Change O of AFM 39-1 placed the responsibility for installing, repairing, operating, troubleshooting, overhauling and modifying electrical/mechanical aircraft instruments,

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR32531 (contd)	sible for installing, inspecting, repairing, operating, troubleshooting, overhauling and modifying electrical/mechanical instruments, instrument systems, components, and associated equipment.	instruments systems, components, and associated equipment in a newly created career ladder, AFS 325X1, Avionics Instruments Systems Specialist and Avionics Instrument Systems Technician.
3ABR42132, Aircraft Pneudraulic Repairman.	No change in prime course.	
	FAST-TRACK COURSE	
	This course, implemented 4 December 1968, is attended by only highly qualified students including college graduates. The student receives the same training, performance, and written testing as given in the above course to insure that he meets all requirements of the STS. This course is 10 academic weeks in duration and allows a saving of 2 weeks training time plus any saving attained by the individual's own proficiency advancement.	This "Fast-Track" course was implemented as a result of ATTSE Ltr, 8 Aug 68, Training and Assignment of Highly Qualified Enlistees.
3ABR42133, Aerospace Ground Equipment Repairman	An accelerated course (Fast-Track) for highly qualified student personnel entering Course 3ABR42133 was implemented on 4 December 1968. Approval was granted on 26 November 1968 to operate the fast track course. Course chart and POI will be revised upon validation of course and graduation of the fourth class. Estimated submission date of course control documents for approval is 3 April 1969. Preparing equipment for "In and Out" of storage was added to the course as a result of the Specialty Training Standard revision. POI was annotated accordingly in lesson 204, AGE Identification,	To reduce training time for highly qualified students entering Course 3ABR42133. Revised Specialty Training Standard, dated 24 October 1968.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR42133 (contd)	Inspection, Painting, and Marking with no change in class time or course length. Effective date of the change was 12 November 1968.	
3ABR42230, Instrument Repairman	Course 3ABR42230, Instrument Repairman, was revised effective with the class entering on 16 October 1968, to conform with Change O of AFM 39-1. This change resulted in the deletion from this career field of the maintenance of Electronic/ Transistorized Aircraft instruments. The deletion of this maintenance requirement resulted in a 15-week course, 2 weeks shorter than the previous course	Change O of AFM 39-1, effective 1 July 1968, deleted from the 422X0 career ladder the responsibility for maintenance of Electronic/ Transistorized aircraft instruments and placed this responsibility in a newly created career ladder AFS 325X1, Avionic Aircraft Instrument Systems.
	FAST-TRACK COURSE	
	This course, implemented 4 December 1968, is attended by only highly qualified students including college graduates. The student receives the same training, performance, and written testing as given in the above course to insure that he meets all requirements of the STS. This course is 10 academic weeks in duration and allows a saving of 4 weeks training time plus any saving attained by the individual's own proficiency advancement.	This "Fast-Track" course was implemented as a result of ATTSE Ltr, 8 Aug 68, Training and Assignment of Highly Qualified Enlistees.
3ABR42330, Aircraft Electrical Repairman	The course chart and POI were revised to reflect minor changes in subject durations and sequence of instruction. The revised course was implemented 6 November 1968. In Block I, the subject "Measuring Devices" was deleted; but the instruction is incorporated with "Series Circuits" where application of meters is first made. "DC Motors" is now taught in Block II rather than III since this subject is more homogeneous with DC generator instruction. Block	Annual review of course control documents. The course chart and POI were revised as a result of findings in recent field and local course evaluations.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR42330 (contd)	II has been completely "Systemized" and began a group-paced service test on 20 November 1968; the results will not be known until the next reporting period. "Variable Frequency Power Systems" was deleted in Block IV since its importance has diminished in the field. New F-4C trainers have been added in Block IV as a vehicle for instruction in AC power systems. Course length has not changed.	
	FAST-TRACK COURSE	
	This course, implemented 4 December 1968, is attended by only highly qualified students including college graduates. The student receives the same training, performance, and written testing as given in the above course to insure that he meets all requirements of the STS. This course is 14 academic weeks in duration and allows a saving of 2 weeks training time plus any saving attained by the individual's own proficiency advancement.	This "Fast-Track" course was implemented as a result of ATTSE Ltr, 8 Aug 68, Training and Assignment of Highly Qualified Enlistees.
3ABR44330G, Missile Mechanic, WS-133A/M	Course length was reduced from 19 weeks and 1 day to 17 weeks by eliminating all performance training related to transportation, emplacement, and removal of the missile. A complete set of course control documents, including Change B to STS 44330G/50G/70G, was approved for implementation with class 681023.	Because of small number of graduates utilized on missile handling teams, the using command approved an ATC proposal to eliminate missile handling performance training in this course and implement a new 78 hour supplemental course to provide the training eliminated from the basic course.
3ABR44330H, Missile Mechanic, WS-133B	Course length was reduced from 19 weeks to 16 weeks and 4 days by eliminating all performance training related to transportation, emplacement, and removal of the missile. A complete set of course control documents, including	Because of small number of graduates utilized on missile handling teams, the using command approved an ATC proposal to eliminate

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR44330H (contd)	Change B to STS 44330H/50H/70H, was approved for implementation with class 681030.	missile handling performance training in this course and implement a new 78 hour supplemental course to provide the training eliminated from the basic course.
3ABR47231, Special Vehicle Repairman	Course number (AFSC) changed from 3ABR47132. Title remains the same. Specialty Training Standard, Course chart, and POI were revised accordingly. A course chart has been submitted proposing that 60 hours be added to course to provide instruction on 463L equipment in compliance with Change O to AFM 39-1, 1 July 1968.	Changes were made to conform with Change O to AFM 39-1, 1 July 1968.
3ABR47330, General Purpose Vehicle Repairman	Course number (AFSC) and the title changes from 3ABR 47131 Automotive Repairman. Specialty Training Standard, Course Chart, and POI were revised accordingly. Change effective with class 680904. No change in course length.	Changes were made to conform with Change O to AFM 39-1, 1 July 1968.
3ABR54430, Cryogenic Fluids Production Specialist	Deleted from course chart 3ABR54430, "Procedures for Startup, Operation and Defrost of O_2-N_2 Plant (6 hours);" added "Preoperation Procedures for Startup and Shutdown of O_2-N_2 Plant (12 hours);" and changed "Continuous Plant Operation" from 93 hours to 87 hours. No change in course length required. Implemented with class 681030.	Internal review established a need for increased emphasis on preoperation procedures.
3ABR63130A-1, Fuel Specialist (Petroleum Fuels)	Course chart adjustment of subjects "Career Familiarization" from 2 hours to 1 hour; "Package Products" from 2 hours to 1 hour; and Assembly, Inspection, and Operation of the Air Transportable (R-14) Hydrant System" from 24 hours to 18 hours allowed addition of "Receipt, Storage, and Issue of Liquid Oxygen" for 8	"Receipt, Storage, and Issue of Liquid Oxygen" added as requested by Headquarters USAF, ATC (ATTMS-S) Ltr, 14 March 1968.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR63130A-1 (contd)	hours with no change in course length. Change implemented with class 681002.	
3AIR75100-2, Technical Instructor	Addition of a 2-hour Unit of Instruction, POI Block II, paragraph 14, Instructional Methodology (Instructional System Development). Time for this unit was obtained by deleting 2 hours from Instructional Methodology (Supervised Lesson Planning) which is now numbered paragraph 15 of Block II, POI 3AIR75100-X, dated 1 October 1968. There is no change in course length. Change effective 1 October 1968.	ATC directed this change in standard POI 3AIR75100-X in order to include material from ATCR 52-33, Instructional System Development.
3ALR25330, Weather Technician (PDS Code AXL)	In Block I, Arithmetic Review was decreased 2 hours and Algebra by 6 hours in order to increase Slide Rule Operation by 4 hours and Elementary Trigonometry by 4 hours. In Block V, Severe Weather was increased 4 hours, and Radar Storm Detection decreased 4 hours. Reallocation of time in Block VIII included a reduction of 4 hours in Codes and Bulletins and 2 hours for Station Operation Lab. Training in Central Weather Facilities (4 hours) and Facsimile Charts (16 hours) was combined into a 12-hour unit, Central Weather Facsimile Charts. These reductions were balanced by adding 12 hours of Satellite Picture Interpretation and increasing Measurement by 2 hours. Change effective 11 November 1968. No change in course length.	Blocks I and V changes of time resulted from internal evaluation, student critiques, and annual review. Reallocation of time to permit the addition of Satellite Picture Interpretation which is closely related to other subject matter of this block.
3AZR30434, Ground Radio Communications Repairman (CIM-10B)	Instructional hours within the course were realigned and the course length increased from 402 to 420 hours, a total increase of 18 academic hours. This increase in instructional hours was added to maintenance training on the squadron supervisory and	A review of the student records indicated a sharp increase in remedial study after the course had been revised and shortened by eight days. In addition a

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR30434 (contd)	control equipment, Block VII. Change implemented with class 690108.	Chanute Evaluation Project indicated that the course was too short. Based on these two factors, an internal review of the course revealed a need for improving training materials and increasing the course length to improve the quality of training.
3AZR30434-3, Ground Radio Communications Equipment Repairman, WS-133A/M	Extensive redistribution of time was made throughout the course. Block I was decreased from 30 to 24 hours, Block II was decreased from 60 to 54 hours, and Block III was increased from 60 to 72 hours. No change in course length. Changes scheduled for implementation with class 690205.	To provide additional instructional time on Launch Facility Security Systems, and to redistribute time on several other subjects to improve quality of maintenance training.
3AZR30434-4, Ground Radio Communications Equipment Repairman	Extensive redistribution of time was made throughout the course. Block I was decreased from 36 to 30 hours, Block II was increased from 60 to 66 hours, Block III was reduced from 102 to 90 hours, and Block IV was increased from 42 to 54 hours. No change in course length. Changes scheduled for implementation with class 690319.	To provide additional instructional time on Launch Facility Security System and UHF Command Radio Group, and to redistribute time on several other subjects to improve quality of maintenance training.
3AZR31672H, Status Authentication Subsystem Maintenance, WS-133B	Training time throughout Block III decreased by 12 hours. This time redistributed throughout Blocks I and II. No change in course length. Changes implemented with class 690226.	To improve allotment of instructional time with subject matter and improve overall quality of course.
3AZR43171-2, Weight and Balance	Minor changes in time allocation and subject matter resequencing to include programmed instruction. No official change in course length. Subject matter programmed: Basic Principles, Load Planning, Load Adjuster, and Chart E Loading Tables and Graphs. The maximum time	To implement improved teaching methods.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR43171-2 (contd)	allotted to programmed text study is 36 hours. Many students complete the course 18 hours short of the 54 hours allocated. The change in this course was implemented on 12 August 1968.	
3AZR53150-1, Machinist	The lesson on Tolerance, Allowance, and Classification of Machine Fits was shifted to the last lesson in Block I. The time allotment for Block I was changed from 56 to 58 hours, and Block III from 68 to 60 hours. There was no change in course content or length. Effective date of change was 8 November 1968.	The changes were made as a result of student critiques, instructor experience, and internal evaluation.
3OBR4341, Aircraft Maintenance Officer	Blocks of instruction were resequenced in the course chart: New I = Old III; New II = Old IV; New III = Old V; New IV = Old VI; New V = Old I; New VI = Old VII; New VII = Old VIII; New VIII = Old IX; New IX = Old II; and Block X remains the same. Minor hour changes were made in Blocks I and V in order to relocate "Orientation." Time was taken from Aircraft Structures and Repairs (3 hours); Aircraft and Engine Corrotion Control, Cleaning and Radioactive Decontamination (2 hours); and Maintenance Tools and Equipment (1 hour). Six (6) hours of orientation were added in Block I. Time was added to Airman Classification System (1 hour); USAF Supply, Reclamation, Redistribution and Marketing Procedures (3 hours); and Technical Order System (2 hours). No change in course length. The effective date of this change was 27 November 1968.	To provide a more logical teaching sequence.
3OBR6021, Motor Vehicle Management Officer	Course number and title changed from 3OBR4721, Motor Vehicle Maintenance Officer. CTS, Course Chart, and POI were revised. Course length was increased by thirty (30) hours from 180 to 210 hours. Block I. Security and Administrative Publications from 4 to 10	Changes were made to conform with Change U to AFM 36-1, 31 July 1968.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR6021 (contd)	hours; Air Force Tech Order System from 6 to 9 hours; Shop Supply Functions from 3 to 6 hours; Officer and Airman Career Fields from 3 to 6 hours; Personnel Requirements from 6 to 9 hours; Organization and Management from 9 to 12 hours; Vehicle Identification, Classification, Painting and Marking from 6 to 9 hours; Technical Orders Parts Catalog from 9 to 6 hours; Safety (3 hours) and Motor Pool Functions (6 hours) moved to Block II. Total increase Block I, 12 hours, from 90 to 102 hours. Block II. The following instruction was added: Drivers School (6 hours) Procurement of Vehicles, Inventory and REMS (3 hours); Dispatch, Assignment and Control (6 hours); Abuse, Misuse, and Corrosion Control (3 hours); Safety (3 hours); Motor Pool Records and Reports (3 hours); and DOD Reports (9 hours). Vehicle Inspection System was increased from 12 to 15 hours. Instruction time was decreased as follows: Depot and Contract Maintenance from 9 to 6 hours; Maintenance Data Collection System from 18 to 12 hours; and Reports Analysis (9 hours) was deleted. Total increase in Block II was from 90 to 108 hours (18 hours). Effective date of change was 31 July 1968.	
3OZR1435J/1545J Survival Training and Protective Equipment Officer	Course number changed from 3OZR1515J to 3OZR1435J/1545J. No change in content or course length. Effective date of change is 11 July 1968.	Change U to AFM 36-1, 31 July 1968.

COURSE CHANGES

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR30100, Air Electronic System Supervisor/Technician	Changes in Advanced Electronic Principles portion of the course are reflected in Course 3AQR30090. Changes in the equipment portion of the course include renumbering blocks of instruction due to the increased number of blocks in the principles portion. In blocks XV and XVI training on weapon system Configuration and Maintenance Analysis has been deleted. In block XV, 2 hours was added to TACAN. In block XVI, 2 hours was added to IFF/SIF. In addition, training on Altimeters, search radar and beacons was decreased by a total of 6 hours which was added to LORAN. In block XVIII, training on inertial navigation devices and typical inertial navigation set was decreased by 12 hours. Training on navigation computer set was increased by 1 hour and Principles of Side Looking Radar (6 hrs) and Principles of Forward Looking Radar (5 hrs) were added. In block XIX the 2-hour unit of instruction, Early Warning Weapons System Configuration, was deleted. This time was added to the indicator group to make it 14 hours. The overall course length remained unchanged. These changes were effective with Class 680821 which enters the equipment blocks on 12 Feb 69.	Changes were made as a result of internal course evaluation including recommendations obtained through student critiques.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR30300, Ground Radar System Supervisor/Technician	Changes in Advanced Electronic Principles portion of the course are reflected in Course 3AQR30090. Changes in the equipment portion of the course include renumbering blocks of instruction due to the increased number of blocks in the principles portion. Block XIV title was changed to Ground Radar Systems. Block length was unchanged; however, training on Auto track radars and AC&W radars was decreased by 3 hours each. This 6 hours has been devoted to Ground Radar Systems Seminar (3 hrs) and Electronic Warfare Seminar (3 hrs). In Block XV training was deleted on timing systems (3 hrs), circulating and stagger trigger generation (6 hrs) and range tracking indicating systems (3 hrs). Training time increased on synchronizing systems (3 hrs) and phased array principles (3 hrs). New subjects added were PIP matching indicating systems (3 hrs) and monopulse systems (3 hrs). In Block XVI, Introduction to Analog Computers (1 hr) and Basic Computer Networks (17 hrs) were combined into one unit and increased to 20 hours. The time was obtained by decreasing DC Computer Circuits from 9 hours to 6 hours. In Block XVII time allocations were decreased as follows for a total of 12 hours: Systems Applications - 1 hr; AC position computer - 6 hrs; DC position computer - 1 hr; DC trajectory computer - 2 hrs; and principles of radar target simulators - 2 hrs. The 12 hours was added as follows: Probmatical factors increased by 1 hour; AC&W simulators increased by 8 hours and GCA simulators increased by 3 hours. In Block XXI integration systems was increased by 6 hours.	Changes were made as a result of internal course evaluations including recommendations obtained through student critiques.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	Monopulse systems (3 hrs) was deleted from this block and moved to Block XV as explained above. Measurement time was decreased by 3 hours. In Block XXII, Azimuth-elevation indicating systems was decreased by 6 hours. Three hours were added to range-height indicating systems and a new 3 hour unit on AIMS was added. In Block XXIII, data processors was decreased by 3 hours, intercept control systems by 6 hours, and remoting systems by 3 hours for a total decrease of 12 hours. New units added were: Gap filler site familiarization (6 hrs) and Long range radar site familiarization (6 hrs). In Block XXIV, IFF/SIF coding systems (15 hrs) and IFF/SIF decoding systems (15 hrs) were combined into a single 30 hour unit IFF/SIF Coding and Decoding systems. This allows correlation of coding to decoding by systems. The overall course length was unchanged. Changes were effective with Class 680821 which enters the equipment blocks on 12 Feb 69.	
3AAR30400, Ground Radio System Supervisor/Technician	Changes in Advanced Electronic Principles portion of the course are reflected in Course 3AZR30090. Changes in the equipment portion of the course include renumbering blocks of instruction due to the increased number of blocks in the principles portion. Block XV, Microwave Systems, and Block XVI, Tropospheric Scatter Systems, have been completely revised and retitled Wideband Systems I and Wideband Systems II. The material presented is basically the same but has been rearranged to be more in line with the principles-centered concept. In Block XVII the 12 hour unit of instruction on related stabilized frequency generators has been deleted. A 3-hour unit of SSB ancillary circuits has been added. Principles of SSB Communications was increased by 3 hours and transmitters increased by 6 hours. In Block XVIII, Principles of	These changes were made as a result of internal course evaluations including recommendations obtained through student critiques. No change was made in overall course length.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	Consoles and keying systems (9 hrs) has been deleted. Tape recorders/reproducers and time announcers have been decreased by 3 hours. UHF multi-channel transmitters and receivers was increased by 3 hours. Flight facilities systems (3 hrs) was added and principles of transmitter and receiver control systems (6 hrs) was added. Block XIX, Instrument Landing Systems, was decreased from 66 hours to 60 hours. This was accomplished by moving principles of flight facilities systems (3 hrs) to Block XVIII as explained above and decreasing block diagrams and power distribution analysis by 3 hours. Block XX, Omni-Range Systems was increased from 54 hours to 60 hours by adding principles of flight facilities systems (3 hrs) and increasing Omni-range systems concepts and equipment configurations by 3 hours. The last two blocks have been changed in sequence. Missile Communications Systems is now Block XXV with no change in content. Closed Circuit Television Systems, now Block XXIV, has been completely revised to reflect better descriptive units of instruction and to include a 2-hour unit on Studio facilities. Changes were effective with Class 680821 which enters the equipment blocks on 12 Feb 69.	
3ABR29330, Ground Radio Operator (Voice)	In Block II, Ground Radio Equipment, some units of instruction were realigned as to sequence, some unit titles were changed, and some minor adjustments in time per unit were made. The changes were: Introduction time reduced from 3 hours to 2 hours; Radio wave propagation decreased from 5 hours to 4 hours; Antennas changed to Antenna Systems and reduced from 4 hours to 1 hour; Transmitter principles was changed to Transmitter tuning and operation and increased from 3 hours to 4 hours; Receiver principles was changed to Receiver tuning and operation and	Changes to Block II of Course 29330 were prompted by revision of the STS which incorporated the E shred.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	increased from 14 hours to 17 hours; and Measurement was increased from 1 hour to 2 hours. These changes did not affect the block length or the course duration. The changes became effective 11 Sep 68.	
3ABR30131, Aircraft Electronic Nav Equip Repairman	The training plan for revision of Course 3ABR30131 was forwarded to ATC(ATTES-A) on 2 Dec 68 and approved 17 Dec 68. The plan extends the course from 35 to 36 weeks. It adds the AN/APX-64 IFF Transponder and the SST-181X Beacon as training vehicles. Blocks XVI and XVII, Principles of Beacon Systems (30 hrs) and Principles of IFF Systems (30 hrs) were combined in one block titled Principles of Pulsed Transponder Systems (90 hrs). The additional 30 hours are the result of including theory and maintenance peculiar to the AN/APX-64 Transponder and the SST-181X Beacon. Revision was effective with Class 680807.	Requested by ATC (ATTES-A) ltr, Revision of Course Chart 23 Mar 67, which authorized the revisions upon receipt of equipment and test equipment.
3ABR30133, Electronic Warfare Repairman	Block XI, weeks 23-24, was revised by deleting 12 hours of instruction on operation of test equipment. Six hours were added to dispensers and six hours of instruction were included on preparation and use of maintenance forms. The instruction time on test equipment has been absorbed in the applicable units of instruction on the "black box". Also, Block XVIII was revised to expand instruction on POD equipment from 12 hours to 48 hours. The current course chart is dated 8 Jul 68 and became effective with Class 680313 which entered week 23 on 14 Aug 68 and graduated on 3 Dec 68.	Internal evaluation results indicated that better understanding of test equipment resulted when the applications are applied immediately to the appropriate black box it supports. The expansion of instruction on the ECM pod is in keeping with the continuing effort to provide graduates trained on current electronic countermeasures systems.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR30332-1, AC&W Radar	Block X, AC&W Transmitter Systems, 4 hours of Maintenance management and ground C&E inspection, 2 hours of care and use of special hand tools, and block diagram analysis of test equipment have been deleted. Block diagram and circuit analysis of the magnetron transmitter has been reduced from 18 to 12 hours. Block diagram analysis of the klystron transmitter has been reduced from 24 to 15 hours. Alignment and system checks of transmitter and timing systems has been reduced from 30 hours to 18 hours. Block XI, AC&W Receiver Systems, only one change in this block reduced the time allocation for comparative analysis of typical radar receivers from 10 hours to 6 hours. Block XII, MTI Systems. Comparative block diagram analysis of MTI Systems was reduced from 6 hours to 3 hours. Alignment, adjustment, and performance checks have been reduced from 30 hours to 15 hours. Six hours have been deleted from the analysis of the phase detector and cancellation circuits of the MTI receiver. Block XIII, Antenna Positioning and Indication Systems. Only one change in this block reduced the time allocation for height finder radar antenna positioning and indicator systems from 33 hours to 24 hours. Block XIV, Identification Systems. Circuit analysis, alignment, adjustment, and basic trouble analysis of the interrogator responder unit was reduced from 24 hours to 21 hours. Circuit analysis, performance checks and basic trouble analysis of passive SIF system has been reduced from 20 hours to 18 hours. Block XV, System Maintenance. Parts replacement and equipment modification has been reduced from 12 hours to 6 hours. System performance checks, alignments, adjustments, and basic troubleshooting has been reduced from 36 to 33 hours. As a result of the reduction in time allocations in	This reduction was to comply with ATC (ATTMC) message 281616Z, Mar 68 (Review of Technical Training Course Lengths). In addition, the AN/FPS-8 and AN/FPS-18 were deleted from the course.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	each block for the above subject areas, the time necessary for measurement and critique has been reduced from 42 hours to 18 hours. The subject areas in each block were also rearranged to provide a more logical sequence of teaching within that block. Block diagram analysis and utilization of test equipment was also reduced by 12 hours. Course length has been reduced from 38 weeks to 34 weeks.	
3ABR30431, Flight Facilities Equipment Repairman	The revision to this course consisted of the addition of three weeks (90 hrs) training on the MMTMC-212 (GRA-111) TACAN Monitor Control. Also included was the change of the TVOR vehicle to the modified Wilcox 482 TVOR. This caused no change in course length or training hour allocation since this only involved using a modified version of equipment currently in use in this course. This change is effective with Class 680508.	The major user of the graduates of this course (AFCS) requested that all students have training on these systems, and Training Evaluation Project 68-26C revealed a requirement for the addition of training on this equipment for all students.
3ABR30531-3, Electronic Digital Data Processing Repairman (RCC-EDLCC/SACCS)	This change deleted all training on the SRCC, Sub C and Sub A equipment except a functional analysis of the Sub A. The functional analysis was added to the unit, Introduction to SACCS and block diagram analysis of Block XI increasing it from 6 hours to 18 hours. Three hours was deleted from each of units 2 and 3 of Block XII. Six hours was deleted from unit 2 of Block XIII. Block XVwas deleted. The course length was reduced from 40weeks to 37 weeks. This change was effective 3 Jul 68 with Class 680612.	Changes were recommended by the SACCS training Conference held at KTTC in Sep 67.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR30531-6, Electronic Digital Data Processing Repairman (Display Equipment/SACCS)	This change reversed the order of Block XV and XVI. Block XVI, AGE in the previous course, is now Block XV, and Block XV, Alert Transmit Console in previous course, is now Block XVI. No change in course length. Change effective 16 Sep 68 with Class 680424.	Internal evaluations recommended realignment for improved teaching effectiveness.
3ABR30533A, Electronic Computer Repairman (DPC/SACCS)	Training on the IBM 1401C subsystem was deleted from the course. Decrease in course length from 39 to 37 weeks. Change effective 9 Oct 68 with Class 680508.	Recommended by SAC, sole user of graduates. Graduates no longer required to maintain this equipment.
3ABR30730, Tele-Communications Systems Control Specialist/Attendant	Effective 17 Jul 68, some minor changes in Block X, Patch Panels, were made. The changes were: the unit of instruction of Features of the main distribution frame was reduced from 3 hours to 2 hours; the Audio patch panels unit was decreased from 12 hours to 8 hours; the DC patch panels unit was reduced from 39 hours to 33 hours; the complete Audio/DC systems analysis unit was increased from 6 hours to 18 hours; and the measurement unit was decreased from 6 hours to 5 hours. No change in block or course length was involved.	The availability of additional frequency division equipment (FGC-29) made possible an increase in lab time on training which more closely meet the operational needs of the field.
	Effective 20 Nov 68, an addition of two academic weeks of training was necessitated to incorporate the training needed to impart the ability to type 20 words per minute. This addition, in turn, made it necessary to include a two-week leave. The result was a total course length of 33 weeks. The typing requirement added a new block of instruction as did the topic of circuit conditioning. The main changes, in turn, exerted minor changes to existing blocks/units of instruction. Approval to the plan reflecting these changes was given 19 Nov 68.	These changes were prompted mainly by Change P to AFM 39-1.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AQR30090, Advanced Electronic Principles	Block VII, Analysis of Functional Circuits of Receiver Systems and Single Sideband (60 hrs) and Block VIII, Analysis of Functional Circuits of Indicator and Servo Systems (60 hrs) have been combined into a single 60-hour block, Block VII, Receiver Systems Indicator and Servo Systems. Test Equipment, Block IX, was decreased 30 hours and renumbered to become Block VIII. Training was deleted on specific test equipments and limited to spectrum analysis and waveform measuring devices. Electromagnetic Compatability training decreased six hours and Tempest training decreased eleven hours and combined to form a new block of instruction, Block IX. A new 60-hour block of instruction, Block X, Communicative Skills, has been added. This block is designed to improve communication effectiveness by presenting principles of oral expression, verbal guidance counseling and conducting conferences and briefings. Time for Human Relations in Management was increased by 18 hours and combined with Counseling to form Block XI, Personnel Management. Block XI, Administration and Publications, was changed to Block XII, Essentials of Air Force Management and increased by 18 hours. In this block, publications training decreased by 6 hours; AF Organization (8 hrs) was deleted; Airman's performance reports, Classification, training and OJT program, and records management was regrouped under Administrative Actions and Procedures and increased by 12 hours. The preceding changes did not constitute a change in overall course length, but did increase the number of blocks of instruction from XII to XIII. Revision was effective with Class 680821.	Changes were made as a result of internal course evaluations including recommendations obtained through student critiques.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR27550, BMEWS Space Surveillance Console Operator	BMEWS Orientation and Indoctrination was reduced by 3 hours. Fundamentals of Radar was reduced by 1 hour. Detection Radar Sub-systems was reduced by 3 hours. Three hours were added to Tracking Radar Sub-systems. Communicative Facilities was reduced by one hour. Electronic Warfare was reduced by one hour. Operation of the Detection Radar Environmental Display was reduced by 7 hours. Operation of the Target Tracking Console was reduced by 6 hours. Interference Analyzer was reduced by 4 hours. Measurement and Critique was reduced by 2 hours. U. S. Space Programs (3 hrs), Basic Math Review (4 hrs), History of Astronomy (4 hrs), Physics Review (2 hrs), and Bulletins (6 hrs), were added as new subjects. Course length was decreased from 78 hours to 72 hours. Change was effective with Class 680724.	Revisions were requested by ADC to provide a common background for all Space Surveillance Courses.
3AZR27550-1, Spacetrack Surveillance Operator/ Technician	The title of the unit on "Radar Systems" was changed to "Fundamentals of Radar" and "Tracking Radar" with a reduction of 10 hours. The "Computer Systems" unit was renamed "Computer Principles" and reduced by 4 hours. The Introduction to Spacetrack Systems was reduced by 15 hours. The following subjects were deleted: Fundamentals of Orbital Motion (12 hrs), Orbital Computation (18 hrs), Space Object Identification (4 hrs), Space Defense Center (2 hrs), Spacetrack Radar Sensor Operations (6 hrs). The following subjects were added to the course: U. S. Space Programs (3 hrs), Basic Math Review (4 hrs), History of Astronomy (4 hrs), Physics Review (2 hrs), Bulletins (6 hrs), Slide Rule (6 hrs), Math Review (6 hrs), Elements (6 hrs), Ground Trace from Elements (6 hrs), Look Angles from SDC Elements (3 hrs), Look Angles from Sensor Elements (6 hrs), Elements from Track	These revisions were requested by ADC to provide a common background for all Space Surveillance Courses.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	Data (6 hrs), AZ/EL Plots (3 hrs), Early/Late Curves (3 hrs), Foreign Launch Analysis and Folders (6 hrs), Introduction to SOI and Use of SOISUM (6 hrs), Domestic Launch (1 hr), Domestic Launch Folders (1 hr), EODET (4 hrs), Performance Test (3 hrs), Detection Radar (1 hr), Basic Computer Programming (6 hrs), Tasking and Mission Planning (6 hrs), Intelligence (1 hr), Special Projects (2 hrs). The course length increased from 90 hours to 120 hours. This change was effective with Class 680724.	
3AZR27550-2, Space Object Identification Analyst Technician	Math Review was reduced by 10 hours. Introduction to Orbital Mechanics was changed to Introduction to Space Systems and reduced by 3 hours. Fundamentals of Radar was reduced by 2 hours. Operational SOI was reduced by 6 hours. Measurement and Critique was increased by 3 hours. The following subjects were added to the course: U. S. Space Programs (3 hrs), Tracking Radar (6 hrs), History of Astronomy (4 hrs), Physics Review (2 hrs), Bulletins (6 hrs), Slide Rule (6 hrs), Elements (6 hrs), Ground Trace for Elements (6 hrs), Look Angles for SDC Elements (3 hrs), Stable Body Technique (2 hrs), Test Case Analysis (4 hrs). Course length was increased from 120 hours to 168 hours. This change was effective with Class 680918.	These revisions were requested by ADC to provide a common background for all Space Surveillance Courses.
3AZR30451, MMTMC-212 F/O Maintenance	This 3-week course was established as a conversion from Course 2ASR30451-29. The course covers Field and Organizational Maintenance of the MMTMC-212 TACAN Monitor. Training is provided on Digital techniques, alignment and repair of the MMTMC-212 and use of the MMTMC-212 to repair the AN/URN-3 TACAN. Effective with Class 680710; discontinued with graduation of Class 681002.	Directed by ATC (ATTES-E) to satisfy a continuing requirement from AFCS for training 90-100 people per year.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR30451-1, Wilcox 482 VOR Mod., F/O	This 8-day course was established as a conversion from Course 2ASR30451-31. The course covers field and organizational maintenance of the Wilcox 482 TVOR and Modification procedures as outlined in TO 31R4-4-5-503. Effective with Class 680710; discontinued with graduation of Class 681030.	Directed by ATC (ATTES-E) to satisfy a continuing requirement from AFCS for training 70-80 people per year.
3AZR30454-1, Ground Radio Communications Equipment Repairman (RT-723/GR; R-1250/GR; AN/GRT-18)	Course length was reduced two days changing course length from two weeks to one week, three days, effective 23 Oct 68. Reduction was accomplished by decreasing the time spent on block diagram analysis of the RT-723/GR Transceiver and analysis of the power supply and by placing performance checks, alignments, and adjustments for a particular component after the analysis of that component. Course was then increased from one week, three days to two weeks, three days to provide for the addition of training on the AN/GRT-18 Radio Transmitter to this course to be effective 8 Jan 69. Course title was changed to reflect addition of the AN/GRT-18.	The reduction in length resulted from the application of Instructional Systems Development procedures to this course, and the subsequent increase of one week resulted from the addition of the AN/GRT-18 to this course as directed by Hq ATC(ATTES-E) ltr, 14 Oct 68.
3AZR30490-1, Tempest Engineering, Installation and Maintenance Familiarization	A 2-week course covering signal measurement, generation and transmission of signals tempest applications and Red/Black criteria was implemented 10 Oct 68. The course replaced Courses 2ASR30070-17 and -18 and 4AST30070-17 and -18.	The course was directed by ATC ltr, 14 Jun 68, ATTES-C, Tempest Training. The course will provide Tempest training for personnel who graduated from career courses prior to expansion to include this information.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR70270, Publications Functions (Supervisor)	Course was altered to incorporate instruction on "Technical Order Requisitioning and Distribution". Revision was accomplished by reducing time spent on all instructional units except "Forms Requisitions" and "Measurement". Net effect was the availability of 16 hours which was allocated as follows: Technical Order Requisitioning and Distribution (15 hrs), Outprocessing Procedures (1 hr). There was no change in overall course length (3 weeks). The change will become effective with Class 690108.	ATC(ATTMS-S) ltr, 17 Sep 68, Changes in Course Content, Course 3AZR70270, directed inclusion of the referenced topic. The action also coincided with submission of a revised CTS which was the result of using command coordination. Revised CTS and Course Chart were approved by ATC 5 Nov 68, and will be effective with the class entering the course on 8 Jan 69.
3OBR1741A, Weapons Controller (Manual)	Effective 24 Jun 68 the 3OBR1741A was increased from 318 hours to 320 hours without any change in course duration(7 wks, 5 days) or resources. Block I, Fundamentals of Weapons Controlling, was decreased from 69.5 hours to 65 hours. The Career Field and Course Orientation unit was reduced from 2 hours to 1-1/2 hours; The Attack Computer was reduced from 5-1/2 hours to 2 hours; and Basic Intercept Procedures was reduced from 45-1/2 hours to 39 hours. Additions included: In-Processing (1/2 hr); General Security (1 hr); LOP Sub-Sonic Attack (1 hr); LOP Super-Sonic Attack (1/2 hr); and Attack Computer Variations (2 hrs). Block II, Electronics of Weapons Controlling, was increased from 19 hours to 20 hours because of a 1-hour addition of unit on Communications Security. In Block IV, 110° Beam and Frontal Tactics, title changed to 110° Beam and Frontal Stern Reattack (FSR) Tactics. The following units were deleted: 110° Beam Intercepts (3.5 hrs); Frontal Intercepts (5 hrs); and 110° Beam and Frontal Intercept Proficiency (13.5 hrs). A 110° Beam	The changes effected were brought about as a result of internal evaluation and to make additional improvements in incorporating recent AFM 3-16 changes.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	and FSR Tactics Application (21-1/2 hrs) and a Mid-Course Critique Unit (1/2 hr) were added. Blocks V and VI were combined and their combined time of 45 hours reduced to 41.5 hours by deletion of the following units: Operational Variations (1 hr); Multiple Control (1 hr); and Fuel Management (1.5 hrs). The Operational Variations Block became Block VI and was reduced by 1/4 hour. The Operational Variations unit (23.5 hrs) was reduced to 20 hours and the following units added: Operational Variation Options (1 hr); Fuel Management (1½ hrs); and Multiple Control (1 hr). The Measurement unit was reduced by 1/4 hour. In Block VII, The title was changed to Line Intercept Procedures and Practice and increased from 20 hours to 25 hours. The Line Intercept Procedures unit was reduced from 10 hours to 5 hours and Line Intercept Control increased from 10 hours to 20 hours. Blocks VIII and IX are actually subdivisions of the earlier version of Block IX with an increase from 89.5 hours to 93.75 hours. The unit on Current Status of Air Defense (1 hr) was deleted and the Norad Control Center Operation Positions unit (60 hours) was deleted. Fundamentals of System Training Mission (4.5 hrs), Systems Training Mission (52.5 hrs), and Operational Readiness (5.5 hrs) have been added. The addition of 1-1/4 hours was made to Measurement, and 1-1/2 hours to the unit of Course Critique and Graduation.	

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR3031, Communications Officer	The course length was reduced by three weeks, changing the length from 43 weeks to 40 weeks. This reduction resulted from the shortened Course 3OQR3000, Officer Electronic Principles, which serves as the first portion of 3OBR3031. In addition to the revision of 3OQR3000, some changes were made in the latter portion of 3OBR3031 to include the addition of a unit on Technical Control and another on Satellite Communications; however, total time of the latter portion was not changed. A few units were moved from one block of instruction to another for more appropriate placement, and the time allocations of some were changed to satisfy requirements of CTS proficiency levels. Revised course was approved by ATC on 2 Aug 68 for implementation with Class 680605.	Changes resulted from recommendations of the Communications-Electronics Officer Training Workshop, 28-30 Nov 67, command coordination of CTS 3OBR 3031, and Training Evaluation Project Number 67-204, Service Test of the Reduction in Training Time in Electronic Officer Principles Course 3OQR3000.
3OBR3041, Ground Electronics Officer	Changes in the first 22 weeks of this course are covered under Course 3OQR3000, Officer Electronic Principles. Block XI - Introduction to Defense Systems. Orientation and introduction to radar systems reduced to 3-1/2 hours. The Air Defense Systems comprising the remaining 14-1/2 hours expanded to 30 hours and placed as Block XVIII, Command and Control Systems, in the revised course. Eighteen hours of ECM Principles and Techniques reduced to 10 hours and moved to Block XIV, Electronic Warfare Systems, in the revised course. Twelve hours on Effects of Weather and Terrain on Radar reduced to 9 hours and moved to Block XVII, Ground Electronics Planning and Evaluation of the revised course. Six hours of Environment Evaluation expanded to 13 hours and moved to Block XVII, Ground Electronics Planning and Evaluation. Title of block changed to Radar Transmitting Systems. Material	Course 3OBR3041 was revised as a result of the C-E Officer Training Workshop conducted at KAFB 28-30 Nov 67. Also more emphasis was placed on C-E programming as a result of graduate student critiques which pointed a weakness in this area.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	from Block XII, Radar Transmitting Systems, moved to this block. Block XII - Radar Transmitting Systems. Eighteen hours of ECCM Features moved to Block XIV, Electronic Warfare Systems in the revised course. Twelve hours of magnetron transmitters expanded to 20 hours. Power amplifiers reduced from 42 to 36 hours. This block reduced from 120 to 66 hours and retained as Block XI in the revised course. Block XII - Radar Receiving Systems. Normal receivers reduced from 30 to 22 hours. Video integrators reduced to 8 hours from 12 hours. MTI indicators reduced 6 hours to 30 hours. Video processors increased 2 hours to 8 hours. Measurement reduced 2 hours to 4 hours. This entire block shortened by 18 hours and retained as Block XII, Radar Receiving Systems, in the revised course. Block XIV - This block increased from 60 hours to 72 hours and retained as Block XIV, Electronic Warfare Systems, in the revised course. ECCM Principles and Techniques moved from Block XI, Introduction to Defense Systems. ECCM Features in Radar Transmitters moved to Block XIV, Electronic Warfare Systems, in the revised course. ECCM Features in Radar Receivers reduced from 27 to 12 hours and moved to Block XIV. Block XV - Indicating Systems AZ-EL indicators reduced to 6 hours from 12 hours. Target simulator and Video Mappers reduced to 2 hours from 6 hours. This material then moved to Block XIX, Special Equipment, in the revised course. Range-Height Indicators (18 hrs) moved to Block XIII, Indicators and Antenna Control Systems of the revised course. Thirty-six hours of Universal Indicator reduced to 16 hours and moved to Block XIII. Block XVI, Monitoring Systems. AJ Consoles reduced from 18 hours to 4 hours. ECCM Tactics vs ECM Capabilities reduced from 6 hours to 4 hours. Maintenance monitor consoles	

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	reduced from 9 hours to 6 hours. This material moved to Block XIV, Electronic Warfare Systems. Eighteen hours of research and briefing reduced to 10 hours and moved to Block XXI, C-E Maintenance Management, in the Revised course. Block XVII - Antenna and Control Systems. Twenty-Four hours of Antenna Drive and Synchronizing Systems reduced to 12 hours. Six hours of Radomes reduced to 3 hours. Marker Generator Systems reduced from 18 to 12 hours. This material moved to Block XIII, Indicators and Indicator Systems, of the revised course. AZ-EL Drive Systems moved to Block XIX, Special Equipment of the revised course. Block XVII - Automatic Plotting and Communications Systems. Eighteen hours of Automatic Plotting Systems and six hours of Navigational Aids moved to Block XIX, Special Equipment, in the revised course. Twelve hours of Communications Systems and eighteen hours of TEMPEST moved to Block XX, Communications and Security, in the revised course. Block XIX - Identification Systems. Overall reduction in this block is 14 hours to 36 hours. There is no shifting of material from this block to another. Subject matter time elements reduced and retained as Block XV, Identification Systems. Block XX - Data Processors. Overall reduction of this block is 18 hours to a total of 42 hours. Original material has been updated and retained as Block XVI, Data Processors, in the revised course. Twelve hours of Defensive Systems moved to Block XVIII, Command and Control Systems, in the revised course. A new block is added as the final Block XXI, C-E Maintenance Management. This block consists primarily of practical application and includes 60 hours as follows: Federal Supply System and TO Numbering (4)	

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	Supply Functions and equipment management (4) CED (1) War plans, programs, and operations plans (3) C-E Programming (6) PCSP (3) Radar siting (5) RFI (6) Facility installation (4) Base master plan (2) PIP records (6) Personnel management (3) Radar site research (10) Measurement (3) (60) During the revision of the course new and/or updated material was added in the following areas: Maintenance and Monitor consoles Identification systems Data processors Radar evaluation Security C-E programming and management Through revisions of subject matter, the course length was reduced from 49 weeks to 41 weeks. Revisions were effective with Class 680306 which entered week 23 on 14 Aug 68.	
3OBR3041-2, Ground Electronics Officer (MAP)	Blocks I through IX changed to reflect revisions approved for Course 3OQR3000. Old Block X deleted. Block XI, Transmitter Systems. Block has been redesignated Block X in the revised course. Block XII, Radar Receivers and Video Processors - has been redesignated Block XI in the revised course. Block XIII, Indicators and Antenna Orientation Systems - has been redesignated Block XII in the revised course. Block XIV, Data Processors - 16 hours of Gap Filler and Control Circuits were combined into 6 hours of Gap Filler Data Processing and Control Equipment. This 6 hour increment was moved to Block XIII, Associated Ground Equipment and Data Processors, of the	Revisions are based on results of the Worldwide C-E Workshop, local evaluations and course analysis.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	revised course. Thirty-Four hours of Processor and Control Circuits have been combined into 18 hours of Long-Range Data Processors and Associated Equipment and moved to the new Block XIII. A 3-hour tour has been deleted. Block XV, Associated Ground Equipment - 6 hours of Functional Operation and Operational Adjustments has been moved to the new Block XIII. SIF Passive System has been reduced from 20 hours to 18 hours, SIF Active System has been reduced from 6 hours to 4 hours, and both moved to the new Block XIII. Twenty-Four hours of Air Traffic Control and Automatic Tracking, 18 hours of Associated Communication Equipment, and 12 hours of New Electronic Equipment have been deleted from the course. The combination of 150 hours of Block XIV and Block XV into one 60-hour block XIII in the new course has also reduced the time necessary for measurement and critique from 9 hours to 4 hours. Course length reduced from 42 to 34 weeks. Revisions will become effective with Class 690319.	
3OBR3061, Electronic Computer Maintenance Officer	Revision incorporates the use of the AN/GSA-51A (BUIC III) computer to replace the AN/FSQ-7 (SAGE) computer as the training vehicle. Emphasis has been placed on circuit function and logic analysis rather than detailed circuit analysis. Military Standard Technical Orders on the AN/GSA-51A have replaced the commercial manuals and field notes available on the AN/FSQ-7. The course length was reduced from 41 weeks to 34 weeks. This change was effective with Class 681030.	This change was initiated as a result of a major revision to the Course Training Standard.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR3231C, Avionics Officer Course (Other)	The training plan for revision of Course 3OBR3231C was approved by ATC(ATTES-A), 16 Aug 68. Implementation date was 11 Dec 68. The course was reduced from 38 to 30 weeks. Fundaments (or electron principles) was reduced to 12 weeks. The major change in the equipment portion is an increased emphasis on management of the maintenance functions and a decrease in the amount of technical details of electronic equipment theory, circuit analysis, and hands-on-equipment maintenance skills. The course now requires that the student perform or take part in maintenance supervision, technical management maintenance studies, reports and briefings. Tours of field activities and participation in job-like maintenance management activities are included in the training.	Keesler Eval Report 67-66. ATC (ATTES-A) ltr, 8 Jan 68, Evaluation of 3OBR3231A, B, C and 3OZR3231A, B, courses. Avionics Officer Training Workshop held at ATC, 1-2 May 68.
3OQR3000, Officer Electronic Principles	Course was reduced by 3 weeks, changing the length from 25 weeks to 22 weeks. The reduced length was effective on a trial basis for the service test of Keesler. Training Evaluation Project Nr 67-204, approved 6 Jun 67, and it was continued formally with the revised course chart effective 7 Aug 68. Reduction was achieved by decreasing the time devoted to mathematics, direct current, alternating current, transmitter and receiver principles, special circuits, and computers. Management training was increased.	Changes resulted from recommendations of the Communications Electronics Officer Training Workshop, 28-30 Nov 67; Keesler Training Evaluation Project Number 67-204, Service Test of the Reduction of Training Time in Electronic Officer Principles Course 3OQR 3000; and command coordination of CTSs OBR3031, 3041, and 3061.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OZR0123, Command and Control Systems Computer Programmers	This course was deleted. Requirements are now being met by Course 3OZR0124-2. Last class was 680717 which graduated on 29 Oct 68.	This course was combined with Course 3OZR0123-1, for better utilization of personnel. This was done as a result of internal evaluation and with agreement of the users.
3OZR0124, AFICCS Computer Programmer	Changed from a Type II course to a Type III. This was previously Course 2OSR0123-25. No change in course length. This change effective with Class 680710.	This was changed in accordance with instructions from ATC.
3OZR0124-2, Command and Control Systems Computer Programmer	This course was established to replace two other courses, 3OZR 0123 and 3OZR0124-1. The course is designed to teach adequate general computer programmer principles and still provide sufficient "hands-on" experience to give the graduates the necessary confidence and competence in using the AN/FSQ-7 equipment as required in the SAGE Computer Programming activities. This course is 7 days longer than Course 3OZR0123 and 6 days shorter than Course 3OZR 0124-1. First class to enter the course was 681016. First graduation will be 6 Feb 69.	This change was initiated by KTTC to provide more economical training.
3OZR0124-3, Store & Forward Communications System Computer Programmer	The course number of this course was changed from 3OZR0123-3 to 3OZR0124-3. No change in course length. The change was effective with Class 681023.	This change was made in keeping with the new officer programmer career field.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OZR1744A, Weapons Controller (Manual) Refresher	Effective 9 Sep 68, the 3OZR1744A Course was increased seven hours without a change in course duration (2 wks, 5 days) or a change in resources. Block I - Orientation and Fundamentals of Weapons Controlling was increased from 38-1/2 hours to 39 hours. The Air Mass Problem Solution unit was reduced from 4 hours to 2 hours. The unit on Tactics was increased from 4 hours to 6 hours and Intercept Practice was increased from 19 hours to 19-1/2 hours. Block II - Weapons and Their Employment was increased from 28-1/2 hours to 31 hours. The Tactics Selection Practice unit was increased from 19 hours to 21-1/2 hours. In Block III - Tactical Air Control was increased from 42 hours to 46 hours. The Aerial Refueling-Thailand unit was increased from 1 hour to 1-1/2 hours, Aerial Refueling and Tactical Environment Practice-Thailand was increased from 10 hours to 11-1/2 hours, Aerial Refueling and Tactical Environment Practice-VietNam was increased from 10 hours to 11-1/2 hours, and MSQ Operation Practice increased from 5 hours to 5-1/2 hours.	The changes were prompted through internal analysis of the course and by course evaluation critiques being received from SEA.
3OZR2025B, Space Object Identification Analyst	This course was revised to include the major elements of a contractor conducted on-site course which was discontinued. Block I, Radar Target Analysis, was decreased by 6 hours while continuing the same subject areas. Block II, Basic Techniques of Space Object Identification, was increased by 30 hours to include those items on Space Object Identification previously taught by the contractor. Block III, Advanced Techniques of SOI, was increased to add Special Techniques (6 hrs). Course length was increased from 180 hours to 210 hours. This change became effective with Class 681024.	This revision was requested by ADC to allow them to cancel a contractor conducted OJT course.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OZR2035A-1, BMEWS Surveillance Officer	BMEWS Transmitter increased by 1 hour. Functions of Missile Impact Predictor (MIP) reduced by 1 hour. Electronic Warfare in BMEWS reduced by 3 hours. Technical Control Doctrine and Operating Instructions reduced by 1 hour. BMEWS Orientation and Indoctrination was reduced by 3 hours. Detection Radar Signal Flow and Data Processing reduced by 1 hour. Tracking Radar Signal Flow and Data Processing reduced by 1 hour. Radar and Maintenance Displays reduced by 2 hours. System Checkout and Monitoring reduced by 1 hour. Measurement reduced by 3 hours. Orbital and launch folders (12 hrs) and Radar principles (4 hrs) and System Performance exercises (11 hrs) were deleted. A 60-hour block of instruction on Space Systems Operations was added as the first block of the course. Course length was increased from 90 hours to 108 hours. This change was effective with Class 680717.	This revision was requested by ADC to provide a common background for all Space Surveillance courses.
3OZR2035A-2, Spacetrack Surveillance Officer	U.S. Space Programs increased by 3 hours. Orbital Computations decreased by 4 hours. Look Angle Computations increased by 1 hour. Space Defense Center increased by 1 hour. Domestic Launch reduced by 2 hours. Foreign Launch reduced by 4 hours. Computer Functions reduced by 3 hours. Mission Planning reduced by 2 hours. Special Projects reduced by 1 hour. Measurement and critique increased by 4 hours. Tracking Radar Systems reduced by 4 hours. Detection Radars Systems reduced by 1 hour. The following subjects were deleted: Foreign Space Efforts (2 hrs), History of Astronomy (3 hrs), Satellite Orbits (3 hrs), Orbital Elements (6 hrs). The following subjects were added: Introduction to Space Systems (2 hrs), Intelligence Briefing (1 hr), Space Environment (3 hrs), U.S. Launch Vehicles (1 hr), Manned Space Programs (1 hr), Introduction to	These revisions were requested by ADC to provide a common background for all Space Surveillance courses.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
	Orbital Computation (6 hrs), Orbital Elements and Bulletins (4 hrs), Introduction to Radar (2 hrs), Computer Systems and Programming (6 hrs), European Space Efforts (2 hrs), Performance Test (2 hrs), Future U. S. Space Plans (3 hrs), The Bulletin (3 hrs), Identification Lab (2 hrs), Foreign Launch Folders (3 hrs), SDC Tasking System (1 hr), Site Operations (2 hrs). Course length was increased from 90 hours to 108 hours. This change was effective with Class 680717.	
3OZR2035B-1, Space Weapons Systems Officer	A 16-week course covering the first 16 weeks of Course 3OQR3000 was implemented 11 Sep 68. The course will provide electronic fundamental information for 2035B officers who must provide operator/maintenance supervision.	The course was directed by ATC (ATTES-A) ltr, 27 Aug 68, Electronic Training, 4000 Support Group (SAC).
3OZR3231A-1, Avionics Officer (Fighter)	Course was discontinued at Keesler with the graduation of Class 681106 on 10 Dec 68. The content of the course was added to Course 3OBR 3231A at Lowry AFB.	Deletion was one of the results of the Avionics Officer Workshop at ATC, 1-2 May 68.
3OZR3231B-1, Avionics Officer (Bomber)	Course was discontinued at Keesler with the graduation of Class 681016 on 26 Nov 68. The content of the course was added to Course 3OBR 3231B at Lowry AFB.	Deletion was one of the results of the Avionics Officer Workshop at ATC, 1-2 May 68.

COURSE CHANGES

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
MABM00010, Basic Military Training, USAF Male MGBM00012, Basic Military Training, USAF Male, ANG MRBM00013, Basic Military Training, USAF Male, Reserve	Reductions were made in the following instructional areas: Drill - 3 hours, from 35 to 32; Inspections - 2 hours, from 14 to 12; Memory Work - 1 hour, from 1 to 0. Increased instruction was given in the following areas: Communicable Diseases - 1 hour, from 1 to 2; Academic Summary - 1 hour, from 1 to 2; Narcotics and Habit-Forming Drugs - 1 hour, from 0 to 1; Time for Alterations - 1 hour, from 0 to 1; Student Time - 2 hours, from 0 to 2. There was no change in course length.	Directed by Headquarters USAF to allow additional time for review of subject matter, and for more effective utilization of time.
MWBM00011, Basic Military Training, USAF Female	Reductions were made in the following instructional areas: Physical Conditioning - 2 hours, from 30 to 28; Student Time - 1 hour, from 11 to 10; Out-processing Time - 2 hours, from 9 to 7. Increases were made in the following areas: In-processing Time - 2 hours, from 19 to 21; Academic Summary - 1 hour, from 1 to 2; Communicable Diseases - 1 hour, from 1 to 2; Narcotics and Habit-Forming Drugs - 1 hour, from 0 to 1. There was no change in course length.	Directed by Headquarters USAF. In-processing could not be accomplished in the time allocated.
MAPM0103, Officer Basic Military Training, Precommissioning, USAF Male MAPM0103-001, Basic Military Training, Precommissioning (WAF) MAPM0103-002, Basic Military Training, Precommissioning (AECP/OTH)	Reductions were made in the following instructional areas: Communicative Skills - 2 hours, from 39½ to 37½; Air Force Leadership - 4 hours, from 55½ to 31½; Air Force Officer - 1 hour, from 33 to 32; Drill and Ceremonies - 2½ hours, from 70½ to 68; Physical Training - 4½ hours, from 62 to 57½; Field Training - 4 hours, from 23 to 19. Increased instruction: Traffic Safety Training - 18 hours, from 0 to 18. There was no change in course length.	To permit inclusion of 18 hours of Traffic Safety Training as directed by Headquarters ATC (ATTDC) letter, Subject: Traffic Safety Training, 6 Sep 1968.
3ALR81130A, Sentry Dog Handler	Instruction on simulated sentry post patrolling was reduced by 9 hours, from 41½ to 32½. Instruction was increased on handler and dog relationship by 9 hours, from 5 to 14 hours. There was no change in course length.	Experience indicates that more time spent establishing a better relationship between handler and dog improves safety by producing a more controllable dog and reducing the number of dog bites.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR30650E-6, Field and Organizational Maintenance, 465L MODEM and Auto-Sync	Instruction was reduced by 12 hours on the use of the DTS AGE (Trouble Shooting and Preventive Maintenance), changing the course length from 7 weeks to 6 weeks and 3 days, effective 22 July 1968.	Analysis of instruction in Block IV indicated improper sequence of instruction and trouble shooting practices. This caused some unnecessary overlap which has been corrected.
3AZR81170A, Sentry Dog Handler Supervisor	Instruction was reduced in the following areas: Care of dog, kennel and equipment - 16 hours, from 19 to 3; Obedience Training - 1 hour, from 9 to 8; Agitation - 2 hours, from 22 to 20. Instruction was reduced by 19 hours, changing the course length from 80 to 61 hours, effective 10 July 1968.	Students no longer have a dog during the training period. Allow time for students to participate in the supervisory activities.
3OBR8121, Security Police Officer	Instruction was reduced in the following areas: Tours - 1 hour, from 5 to 4; Courtroom Procedures - 1 hour, from 2 to 1; Security Operations - 10 hours, from 16 to 6; Night Exercises - 4 hours, from 4 to 0; Caliber .38 revolver - 11 hours, from 20 to 9. Increases were effected in the following areas: Pre-test - 1 hour, from 0 to 1; Career Motivation - 1 hour, from 0 to 1; Riot Control - 2 hours, from 0 to 2; Fire Power Demonstration - 1 hour, from 0 to 1; M-60 Machine Gun - 1 hour, from 1 to 2; Grenade Launching Techniques - 1 hour, from 1 to 2; Tactics Training - 5 hours, from 5 to 10; Counselling Time - 2 hours, from 0 to 2; CSC Exercises - 1 hour, from 3 to 4; Limited War Training - 4 hours, from 4 to 8. The course was reduced by 8 hours, changing the course length from 160 to 152 hours, effective 30 July 1968.	Student's comments, internal evaluations and the need to adapt to the changing role in SEA and controlling civil disorders.

COURSE CHANGES

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3AAR23470, Precision Photoprocessing Technician	Homogeneous subject matter was combined into larger segments to permit more flexibility in POI changes without making course chart changes. No change in course length.	Management action to reduce control document changes.
3ABR32130K, Bomb-Navigation System Mechanic (B-52E, F, G and H, ASB-4A/9A/16 Systems)	Course length was reduced from 40 weeks to 36 weeks by lowering the training standard levels and reducing instruction time in the areas of publications, AF Supply Discipline, operation of the BNS and Calibration of the MADREC and Category II Aerospace ground equipment. Implementation date is 681106.	Review of technical course lengths. Concurrence of SAC for reduction of calibration training on Category II AGE.
3ABR32130L, Bomb-Navigation Systems Mechanic (B-52C/D: ASB-15 System)	Reactivation of course. Course length 39 weeks. Implementation date is 680724.	Directed by Hq ATC Msg 312244Z MAY 68 paragraph 2. To accommodate SAC TPR for FY 69 and FY 70.
3ABR32230B, WCS Mechanic (F-100A/C/D/F: MA-3 ASG-17 System)	By adjusting time in circuit tracing on the range computer, A-4A Sight, motion and servomechanisms, sight power supplies, gun and rocket modes and introduction to the ASG-17 FCS, course length was reduced from 23 weeks to 21 weeks and 3 days. Implementation date is 690115.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR32231A-5, WCS Mechanic (F-106A/B: MA-1 ASQ-25 Systems)	Course length was reduced by realignment of course materials. Radarscope and short ground check self test procedures have been simplified by the multi-mode storage tube modification. Two weeks of mid-course leave were eliminated. Course length was reduced from 34 weeks to 29 weeks. Implementation date is 681002.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.
3ABR32231F-5, WCS Mechanic (MG-10/13 Systems)	By reallocating and reducing time, reorganizing the sequence of instruction, and eliminating 12 hours of measurement, course length was reduced from 26 weeks to 24 weeks. Implementation date is 680904.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.
3ABR32231R, Weapon Control System Mechanic (F-111A)	It was found that by combining some theory subjects and maintenance practices that the objectives can be accomplished in less time. Course realignment and time adjustment. Course duration decreased from 25 weeks to 23 weeks effective 28 June 1968.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR32330E, Defensive FCS Mechanic (B-52H, B-58: MD-7, ASG-21 Turrets)	By adjusting time in orientation and security, maintenance management, measurement and critique, course length was reduced from 29 weeks to 28 weeks. Implementation date is 680501.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.
3ABR32330G, Defensive FCS Mechanic (A-3A, MD-9, ASG-15 Turrets)	By adjusting time in orientation and security, maintenance management, measurement and critique, course length was reduced from 34 weeks to 32 weeks and 4 days. Implementation date is 680925.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents.
3ABR46230-2, Weapons Mechanic (TAC)	Course realignment and time adjustments. Overall course duration reduced from 18 weeks to 15 weeks, 3 days. Change was effective with Class 681211. Significant reductions were made in the following areas of instruction as follows: Fundamentals of electricity - 30 hours; Airmunitions - 12 hours; F-100 Weapons System - 12 hours; F-105/F-111 Weapons Systems- 12 hours; Publications - 6 hours.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents. Instruction is now specifically directed to the graduates' first assignment with practical exercises provided on equipment used in the particular command.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR46230-3, Weapons Mechanic (SAC)	Course realignment and time adjustments. Overall course duration was reduced from 12 weeks to 9 weeks, 1 day. Change was effective with Class 681211. Reductions were made in the following areas of training: Fundamentals of electricity - 30 hours; Airmunitions - 12 hours; M61A1 Automatic Gun - 24 hours; B-52 Nuclear Weapons System - 12 hours; Publications - 6 hours.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents. Instruction is now specifically directed to the graduates' first assignment with practical exercises provided on equipment used in the particular command.
3ABR46230-4, Weapons Mechanic (ADC)	Course realignment and time adjustments. Overall course duration was decreased from 12 weeks to 8 weeks, 2 days. Change was effective with Class 681211. Reductions were made in the following areas of training: Fundamentals of electricity - 30 hours; Airmunitions - 12 hours; M61A1 Automatic Gun - 24 hours; F-101B Weapons System - 18 hours; F-102A Weapons System - 18 hours; Publications - 6 hours.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents. Instruction is now specifically directed to the graduates' first assignment with practical exercises provided on equipment used in the particular command.
3ABR64530-1, Inventory Management Specialist	Rearrangement of lessons to provide for better sequence of instruction and to make each block length a multiple of 30 hours. COMSEC training was added to the course. Instructional time for COMSEC was obtained by reducing training on Study Habits, Safety and Security by one hour and USAF Stock Lists by two hours. No change was made in the overall course length.	Implementation of COMSEC training directed by ATC. Rearrangement of subject sequence and block times recommended by instructor and supervisor personnel.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR64730-1, Materiel Facilities Specialist	Course control documents updated to reflect revised STS. Minor changes in lesson sequence and time allocation permitted addition of 3 hours of COMSEC training. Course length did not change.	Changes made to improve teaching sequence, implement COMSEC training as directed by Hq ATC, and to support revised STS, dated 3 September 1968.
3ABR65130-1, Procurement Specialist	Rearrangement of subject sequence presentation and addition of COMSEC training. Procurement reports was reduced by one hour to provide the instructional time for COMSEC. No change was made to course length.	Implementation of COMSEC training was directed by Hq ATC. Rearrangement of subject sequence recommended by instructor and supervisor personnel.
3ABR99125I, Special Electronic Technician	New course. Course length is 28 weeks. First class is scheduled for entry on 681211.	PTT 70-1, Change B-1.
3ALR30173-1, F/FB-111 Penetration Aids Test Stations Technician.	New course. Course is 18 weeks long and starts with Class 681127.	Addition of new equipment to inventory.
3ALR32571-1, F-111 CADC Test Station Technician	Course realignment and time adjustments. Course duration decreased from 3 weeks to 2 weeks, 3 days effective 15 November 1968. The time was reduced by eliminating instruction on the subsystem tie-in test set which is the responsibility of AFSC 326X0.	Local management action, taken as result of Calibration Requirements Summary review and establishment of AFSC 326X0.
3ALR32571, FB-111 CADC Test Station Technician	New course, implemented with Class 681106. Course is 5 weeks, 2 days long.	Addition of new equipment to inventory.
3ALR64830A-1, Supply Systems Specialist (Standard Supply Computer Console Operator)	Course title was changed from Supply Computer System Specialist to Supply System Specialist (Standard Supply Computer Console Operator) to agree with the title of the specialty description, AFM 39-1.	Change course title in accordance with AFM 39-1.
3AQR99125, Special Electronic Fundamentals	In the course chart "Orientation (3 hrs) and Safety and First Aid (3 hrs)" were combined into "Orientation (6 hrs)". No change to course length.	This change will allow flexibility in applying time to different orientation subjects This course supports Courses 3ABR99125B, E, H, Q, U, Z-1, Z-2, and L.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR23374, Color Photo Processes	Course number change IAW Change N to AFM 39-1. Time reallocations were made as follows: Exposure of negative color films increased from 26 to 32 hours; Corrective techniques and slide finishing reduced by six hours. No change in course length. Change effective 28 August 1968.	AFM 39-1 change, and course graduate evaluation.
3AZR64770, Supply Inspector	New course. Course length is two weeks. Training started 9 October 1968.	A new airman supplemental course designed to provide training to prepare supply inspectors in identifying and determining condition and status of property. Request of using commands.
3AZR64870A-2, Base Supply Trainer (UNIVAC 1050-II)	New course. Course length is two weeks. Training started 23 October 1968.	A new airman supplemental course designed to provide training for the supply trainer in the use of AFMs 67-1 and 67-6 in planning and conducting base level courses for supply personnel, custodians, and customers. Request of using commands.
3OAR4611, Aerospace Munitions Staff Officer	Course realignment and time adjustments. Overall course duration was decreased from 13 weeks to 8 weeks. Change was effective with Class 680814. Reductions were made in the following areas: Non-nuclear munitions - 84 hours; Nuclear munitions - 66 hours; Emphasis in course is now on staff management, rather than the technical aspects of aerospace munitions.	ATC (ATTMC) Msg 281616Z MAR 68, Review of Technical Training Courses. "Request you review the curriculum of each type II and III course for essentiality and identify any nice-to-know content which could be deleted without adversely affecting the performance ability of the graduate." LTTC Msg 032325Z APR 68 to ATTMC identified courses proposed for reduction. ATC (ATTSE) letter, 3 May 1968, Concurrence with reductions subject to submission of revised documents. Reduction of course duration has been a subject of informal discussion between USAF, ATC and Center personnel. Current entries into the course have recent technical experience, primarily in the area of non-nuclear munitions (SEA experience) and munitions maintenance officer duties (nuclear). Therefore, significant reductions were made in both technical areas.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR3231A-1, Avionics Officer (Fighter)	The revised course includes 12 weeks of Electronic Principles, 3 weeks of Maintenance Management, 11 weeks of Fighter Systems, and 4 weeks of Communications and Navigations Systems and Electronic Warfare. By cutting 30 hours of Maintenance Management from the former 3OBR 3231A-1 and adding 30 hours each to blocks XII and XIII and 120 hours of Communications and Navigation Systems and Electronic Warfare, the length was increased from 25 to 30 weeks. Implementation date is 680925. The 120 hours of Communications and Navigation Systems and Electronic Warfare training was added because of the transfer of 3OZR3231A-1 from KTTC to Lowry.	Lowry requested ATC (ATTES-A) by letter, 15 Mar 1968, to consider the consolidation of course 3OZR3231, conducted at KTTC, with courses 3OBR3231A-1 and 3OBR 3231B, conducted at Lowry. Training could be accommodated with no additional equipment, facilities or instructors. In addition TDY costs to KTTC and the loss of two weeks between Lowry and Keesler training would be eliminated. This recommendation was approved by ATC (ATTES) by letter dated 23 Apr 1968.
3OBR3231B, Avionics Officer (Bomber)	The revised course includes 12 weeks of Electronic Principles, 2 weeks of Maintenance Management, 14 weeks of Bomber Systems, Defensive Fire Control Systems and USAF Missiles, 4 weeks of Communications and Navigation Systems and Electronic Warfare. By reducing 30 hours in the Management block and 180 hours in the Bomber Systems blocks of the old course chart, we were able to provide SAC Maintenance Management (60 hrs); FB-111 (30 hrs); and Communications and Navigations Systems and Electronic Warfare (120 hrs) without increasing course length (32 weeks). In the latter blocks the only new material is 30 hours of SAC Maintenance Management and 30 hours of FB-111. Implementation date is 681106. The 4 weeks of Communications and Navigation Systems and Electronic Warfare training was added because of the transfer of 3OZR3231B-1 from KTTC to Lowry.	Lowry requested ATC (ATTES-A) by letter, 15 Mar 1968, to consider the consolidation of course 3OZR3231, conducted at KTTC, with courses 3OBR3231A-1 and 3OBR3231B, conducted at Lowry. Training could be accommodated with no additional equipment, facilities or instructors. In addition TDY costs to KTTC and the loss of two weeks between Lowry and Keesler training would be eliminated. This recommendation was approved by ATC (ATTES) by letter dated 23 Apr 1968.
3OBR6531-1 Procurement Officer	Course was revised to provide instruction on COMSEC. Procurement organization was reduced by one hour to provide time for COMSEC. Course length was not changed.	Implementation of COMSEC training was directed by Hq ATC.

COURSE NO. & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR8051-1, Air Intelligence Officer	Targeting materials and automatic data processing were originally covered in one block. This change provides for each subject to be covered in separate blocks. No change in course length.	This has been done to facilitate testing of the two subjects.
3OZR3044-3, Special Ground Electronics Officer	Block II was changed from teaching the Q, U, and H systems to the Q, I, and B systems, and increased from 120 to 150 hours duration. Block II was changed from the B and Z systems to the K system (includes U, H, and Z). This block decreased from 150 to 120 hours. No change in course length. The CTS was changed to combine paragraphs 2 and 3 and to eliminate specific equipment references.	This course was revised to include training on the I system, reduce training on the ZI system and eliminate training on the Zc system. Eliminating specific equipment references in the CTS will avoid future revision when individual systems change.
3OZR8011-2, Air Intelligence Officer (MAP)	In Block V - "Military Vehicles" was changed from 6 to 4 hours; "Artillery" from 6 to 4 hours; "Military Defenses" from 6 to 4 hours and added "Field trip to Fort Carson, CO" (6 hrs)(U). In Block VIII "Functional Analysis" was changed from 12 to 6 hours, and "Coke, Iron, and Steel Industrial Field Trip" (6 hrs) (U) was added.	These changes were necessary to document the two field trips in the course.
3OZR6424-1, Supply System Management	Course length was increased from 2 weeks to 2 weeks, 3 days. Additional time was provided for the lessons on the Standard Supply System and Base Level Financial Management. Effective date for course length increase is 690108.	Course evaluations and student critiques indicated more emphasis should be placed in the Supply and Financial Management areas.
3OZR6534-1, Advanced Base Procurement Management	Training on Small Business Procedures and Foreign Procurement were added to the course. Cost reduction techniques and labor law were reduced by 2 hours to provide instructional time for the added subjects. No change to course length.	Management action to update course upon approval of the CTS.

COURSE CHANGES

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR42131, Aircraft Propeller Repairman	Course was revised to delete 30 hours instruction on Curtiss Turboelectric Propeller and add 30 hours instruction on Aeroproducts Turbopropeller. Internal sequence of course was rearranged to provide uninterrupted training on Curtiss Electric and Hamilton Standard Propeller as well as Hamilton Turbopropeller and Aeroproducts Turbopropeller. No change in course length.	Update course content with current propeller specialist training requirements for major commands.
3ABR54130, Missile Facilities Specialist, LGM-25	Course length was reduced by 2 weeks changing equipment phase of training from 14 weeks to 12 weeks. Change was effective with Class 680619 which entered the equipment phase of training 4 Sep 1968. Instruction on Electric Power Generation (Block VII) and Air-Conditioning Systems (Block X) was reduced 30 hours in each block. Revised course chart dated 4 Jun 1968.	Both internal and graduate evaluations indicated that course reduction was possible without loss of graduate effectiveness. The change was made in the interest of economy of training resources.
3ABR60531, Air Cargo Specialist	Formerly Air Freight Specialist. Realignment of subject matter. Instruction on materials handling equipment increased from 9 hours to 26 hours. Deleted 3 hours from tiedown, 3 hours from principles of weight and balance, 3 hours from C-124 load and unload, 2 hours from records and reports and 6 hours on technical orders. No change in course length.	Requests from both CONUS and SEA, and implementation of a portion of the systemization plan.
3ABR68730, Programming Specialist	Course length was reduced by one week, changing course length from 9 weeks to 8 weeks effective 9 October 68. Elimination of training on machine oriented assembler language and concentration on the COBOL language resulted in a net decrease of one week in course length. Three hours of Communication Security training was also added to the course by deleting three hours from General Security.	UNIVAC 1050-II computer replaced by Burroughs 3500 for instruction on programming. Also Hq ATC letter dated 24 January 68, directed that instruction on Communication Security be included in all basic courses.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ALR67230, Budget Specialist	Deleted 70 hours of conventional budget procedures covering the preparation of financial plans and budget estimates for the Operation and Maintenance Appropriation. Added 70 hours of operating budget procedures incorporating the RMS/PRIME concept for preparing an Operations Budget. No change in course length.	This course revision was generated by a comprehensive systems change resulting from the implementation of the Department of Defense "Resources Management System"
3AZR43170-2, Helicopter Mechanic (UH-1F)	Course Chart and POI were revised to align with revised CTS SH52-3AZR-43170-2, 16 Sep 68. One hour of instruction on compressor cleaning was integrated into present engine instruction by reducing one hour of engine operation instruction. One hour of troubleshooting the hydraulic system was added to present instruction by reducing hydraulic system operation by one hour. No change in course length.	CTS SH52-3AZR-43170-2 was revised to include elements and code level changes suggested by commands utilizing course graduates.
3AZR06789-1, Automated Systems Programming Technician (Management Support System)	Deleted 120 hours of programming training on the UNIVAC 1050-II computer. Added 120 hours of programming training on the Burroughs 3500 computer. No change in course length.	UNIVAC 1050-II computer replaced by Burroughs 3500 for instruction on programming.
3AZR68750, Computer Programming	Deleted 120 hours of programming training on the UNIVAC 1050-II computer. Added 120 hours of programming training on the Burroughs 3500 computer. No change in course length.	UNIVAC 1050-II computer replaced by Burroughs 3500 for instruction on programming.
3OBR6731, Budget Officer	Deleted 87 hours of conventional budget procedures covering the preparation of financial plans and budget estimates for the Operation and Maintenance Appropriation. Added 87 hours of operating budget procedures incorporating the RMS/PRIME concept for preparing an Operations Budget, and Communications Security. No change in course length.	This course revision was generated by the implementation of the Department of Defense "Resources Management System" and Hq ATC letter dated 24 Jan 68 directing that instruction on Communications Security be included in all basic courses.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3OBR6921, Management Analysis Officer	Revised to add four hours of training on the Mathatron 4280 TD, Printing Calculator by reducing Data Automation training by four hours. No change in course length.	This course revision was generated as a result of implementing training on the Mathatron 4280 TD, Printing Calculator.
3OZR7500-1, Instructional System Development	Complete revision of the 24 hour course. Decreased emphasis on the first four steps of the systems approach to course development and increased emphasis on the latter four steps of the approach. No change in course chart time nor course length.	Changed to align course with instructional systems development approach.
3OZR7500-2, Curriculum Development and Management	Complete revision of the 54 hour course. Decreased emphasis on the first four steps of the systems approach to course development and increased emphasis on the latter four steps of the approach. No change in course chart time nor course length.	Changed to align course with instructional systems development approach.

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COURSE CHANGES

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3ABR40330-1, Medical Equipment Repairman	Training Plan was approved 4 September 1968 which restructured course to include 15 weeks of electronic fundamentals and maintenance of electronic equipment. The course also includes 6 weeks of training on medical electronic equipment, 6 weeks on X-ray equipment, 10 weeks on dental and general medical equipment, 3 weeks on AF subjects and maintenance shop procedures and a 2 week mid-course leave. Course length was extended from 20 to 42 weeks and will be effective in FY1970.	Directed in ATC (ATSGS-E) letter, 30 November 1967.
3ABR90430-2, Medical Laboratory Specialist	Improvements in statements of learning objectives and minor changes in time allocations and subject matter resequencing. Lab Administration was reduced by 2 hours in order to add 2 hours of Quality Control. No other new material was introduced and there was no change in course length. New course chart and POI implemented with class 681127.	Improvement in sequencing and overall presentation of subject matter resulting from internal evaluation.
3ALR91431, Psychiatric Ward Specialist	Minor changes in subject matter time allocations and instructional sequence. No new material was added and there was no change in course length. New course chart and POI implemented with class 681016.	Changes based on course operating experience and to align with new STS code level requirements.
3AZR90270, Medical Service Technician(Independent Duty)	Training Plan for this new course was approved 13 August 1968 to be implemented in September 1969. Course chart increasing length from 7 to 9 weeks was approved 10 September 1968. Introduction to Site Medicine was increased from 60 to 72 hours; Emergency Procedures increased from 36 to 51 hours; Management of Common Disorders increased from 74 to 87 hours; Military Public Health was reduced from 40 to 30 hours; and a new Block V. Clinical Application, 40 hours was added.	Changed to meet newly established prerequisites identified in ATC (ATSGS-E) letter, 13 August 1968.
3AZR90670, Executive Hospital Housekeeping	Minor changes in time allocations and subject matter resequencing. No new material was added and there was no change in course length. New POI and revised course chart were implemented with class 681127.	Changes based on internal evaluation.

COURSE NO & TITLE	DESCRIPTION OF CHANGE	REASON
3AZR98270-4, Complete Denture Prosthetics	The revised course chart and POI permitted a reduction in course length from 210 hours to 198 hours. Fundamentals of Complete Dentures was reduced from 40 to 30 hours; Set-up Technique from 30 to 18 hours; Hanau Technique increased from 30 to 36 hours; Immediate Denture and Hydrocast Technique reduced from 40 to 24 hours; Tilon Technique from 46 to 34; and the addition of a new block, Complete Denture with Cast Metal Base, 32 hours. New documents were implemented with class 681108.	Revised for alignment with new course training standard.

CHART I

SUMMARY OF CHANGES TO TYPE 3 TECHNICAL TRAINING COURSES

The chart below is a summary, by center, of Type 3 course changes during the first half of FY 1969. For each center, it gives the number of courses which have increased or decreased in total length together with the total number of hours of such increases or decreases. For courses which have been revised but whose total length has not changed, it gives the number of courses which added new material of one or more hours without changing the course length and the total number of hours added to these courses.

CENTER	REDUCTIONS IN TOTAL COURSE LENGTH		INCREASES IN TOTAL COURSE LENGTH		NEW MATERIAL (TOTAL COURSE LENGTH UNCHANGED)	
	Hours Reduced	No of Courses	Hours Increased	No of Courses	Hours of New Material	No of Courses
Chanute	282	4	168	4	161	15
Keesler	1398	11	294	7	425	10
Lackland	39	3	0	0	86	8
Lowry	924	12	168	2	118	9
Sheppard TS	90	2	0	0	528	10
Sheppard MSS	12	1	730	2	2	1

PART V

PART V

The following listing is presented to give the reader a feel for the scope and responsibility of the Technical Training Centers. Bear in mind that these numbers reflect courses activated and discontinued in the first half of FY69, and in some cases the same course is included in both totals. This is because (especially in the case of Type 1 and 2 courses) a course may be conducted for only one or two classes or it may change from a Type 1 or 2 course to a Type 3 course due to a continuing need for trained personnel.

In the case of Type 4 courses (Field Training) these numbers can be deceiving in the opposite direction. A course shown in these totals may be activated and discontinued at many bases but will be shown only as a single start or stop in the following tabulation.

COURSES ACTIVATED

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5
Chanute TTC	27	8	5	13	3
Keesler TTC	48	29	17	8	23
Lackland MTC	3	6	0	2	4
Lowry TTC	33	44	7	6	38
Sheppard TS	76	15	4	204	50
Sheppard MSS	0	0	2	0	0

COURSES DISCONTINUED

	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5
Chanute TTC	28	5	2	15	2
Keesler TTC	11	14	11	20	3
Lackland MTC	1	1	0	1	2
Lowry TTC	35	34	10	8	28
Sheppard TS	84	17	1	155	51
Sheppard MSS	0	0	0	0	0

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